



The Resonator

Official Newsletter of The Fair Lawn (NJ) Amateur Radio Club

Volume 8, Number 4

www.FairLawnARC.org

April 2023

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From The President

Folks,

Spring is now in full swing, and I'm pleased to announce some great things coming up.

First, updates on items from last month. Super Science Saturday on March 4 was a great success. FLARC members and their young audience had a great time, and 35 families signed up to be involved in youth activities that will be announced by Lee KD2DRS. Also, Ed W2XR coordinated a second joint on-the-air event with the West Palm Beach Amateur Radio Group (WPBARG) on March 25, this time to share slow scan TV (SSTV) images between our clubs. It was a fun morning. Watch for more joint events with WPBARG.

Coming up in April, we have two events scheduled for the 15th, a transmitter hunt (fox hunt) led by Bob KD2BKD and David KD2MOB at Memorial Park in Fair Lawn at 12:00 and "Pizza Radio to Go!", a youth event planned by Lee KD2DRS at which kids and their families will come to the club to build a portable crystal radio kit from a pizza box. (It's unusual for us to have two major events scheduled on the same day. Our plan is to announce procedures at our April business meeting designed to help us avoid conflicts moving forward.) All are welcome to participate in the fox hunt. Lee has chosen a team to staff the kit build event. If you would like to participate, please contact Lee.

Also, on the weekend of April 21-23 is the Scout Masters' Camporee at Lake Frederick, NY, sponsored by the U.S. Military Academy at West Point. This was great fun last year. If you are interested in attending, please coordinate with Jim KB2FMH, who must provide you with a parking pass and guidelines for your participation.

Another upcoming event that I want to mention well in

Continued on next page.

Member Profile

NAME: Dave Henninger CALL: N3UXK

How did you get interested in ham radio?

I first got licensed when I was in college at Penn State, hence the 3-land call. Some of my first contacts were made using the K3CR station (PSU Amateur Radio Club). I also did my first field day with Nittany Amateur Radio club in State College, PA, and I have been hooked ever since. I still have great memories of my first field day and the many others that followed with other clubs (Fairlawn, Splitrock, and Passaic County).

What parts of the hobby most interest you?

I most enjoy the public service aspect of the hobby. I volunteer with the Passaic County Sheriff's department communications team. I also volunteer with Event Hams supporting the New York City Marathon, Half-Marathon, and Triathlon. I believe it helps to spread the benefits of Amateur Radio and its fun to get out and work with others. From a technical side, I love to build and try new things. Most recently I have built a few projects based on the ATTINY85 microcontrollers.

What do you do/what did you do for a living?

I work as a Quality Manager for Corbion, a local food ingredients company. I assure that our warehouses are compliant with food safety regulations and best practices. In addition to my non-technical job functions, I also provide technical support to my department, until IT arrives. Sort of an IT first responder.

What help or information do you need that the club could provide to really get involved with ham radio?

I think it would be fun to have a project building class/day(s).

What else can you tell the club about yourself and/or ham radio?

In addition to amateur radio, I am involved with Passaic County CERT, Little Falls CERT, and Woodland Park OEM. I am an amateur welder, woodworker, and all around crafter.

From The President, continued

advance is Earth Day at Paterson Great Falls on Wednesday, May 24 from 9:00 AM to 4:00 PM. Following his success as leader of this event in 2022, Steve KA2YRA will be coordinating again this year. Watch for announcements from him and feel free to contact him with any questions. This event is always a tremendous opportunity for FLARC to bring amateur radio to our community and is enjoyed by people of all ages.

I'm also very excited to share with you a new initiative that's under way--an outreach program designed to generate participation among existing, paid members who are not currently active. This is a two-pronged effort, being led by an Outreach Committee, chaired by Fred W2ABE, and the Education Committee. Our education committee, formerly led by our beloved Vice President, John W2JLH, who went SK in 2021, will be revived under the capable leadership of Stan K3KKH. I'm grateful to Stan for his willingness to step up to chair this committee. Fred and his team will be contacting members to gauge their interests and willingness to become more involved. Stan and his team will be designing basic training programs (e.g., how to get on the air, how to set up a station, etc.), coordinating the efforts of our Special Interest Group (SIG) leaders, and coordinating with Fred and his team once they have gathered data. The lynch pin that makes this all possible is Ed WX2R's member survey results. The survey provides a highly useful, introspective look at FLARC and an inventory of interests that provides a clear roadmap for this initiative. Thanks, Ed. Watch for news about this in coming weeks.

Finally, I want to thank David KD2MOB and Lee KD2DRS for their flexibility in changing roles on the Board as we filled a vacancy left in early March. David has moved from Vice President to Treasurer and Lee has moved from Secretary to Vice President. And I want to welcome Jim W2KNG as our new Secretary. The current structure of our Board positions us very favorably for continued success moving forward.

73,

Dave Corsello, KD2JIP
FLARC President

Continued on next page.

Member Profile, continued



Dave Henninger N3UXK

2023 Dues Are Due

Dues for 2023 will be accepted by the club starting on December 2nd with the 2022 Annual Meeting. There are no changes to dues for the upcoming year. Cutoff date was March 31, 2023. But we'll still take it!

Please make checks payable to:
"Fair Lawn Amateur Radio Club"
and send them to:

Fair Lawn ARC
– Attn: David KD2MOB
10-10 20th Street
Fair Lawn, NJ 07410

Please include a member application form with your check regardless of your member status.
It can be found near the back of this newsletter.



FLARC and WPBARG To Hold Additional Joint Contacts

FLARC and our club partner WPBARG will hold an additional "Saturday in the Park" exchange on Saturday, 29 April beginning at around 1030. WPBARG will again test its remote slow scan capabilities and we will be looking to exchange some pix as well. Hopefully there will again be both voice and CW contacts as well.

Check in on the FLARC repeater, Echolink, on Slack or on the spotting networks for either W2NPT or W4HAW to see where we are. We are looking to get an additional date in before the heat and rainy season settles in on South Florida.

Check in and join the fun.

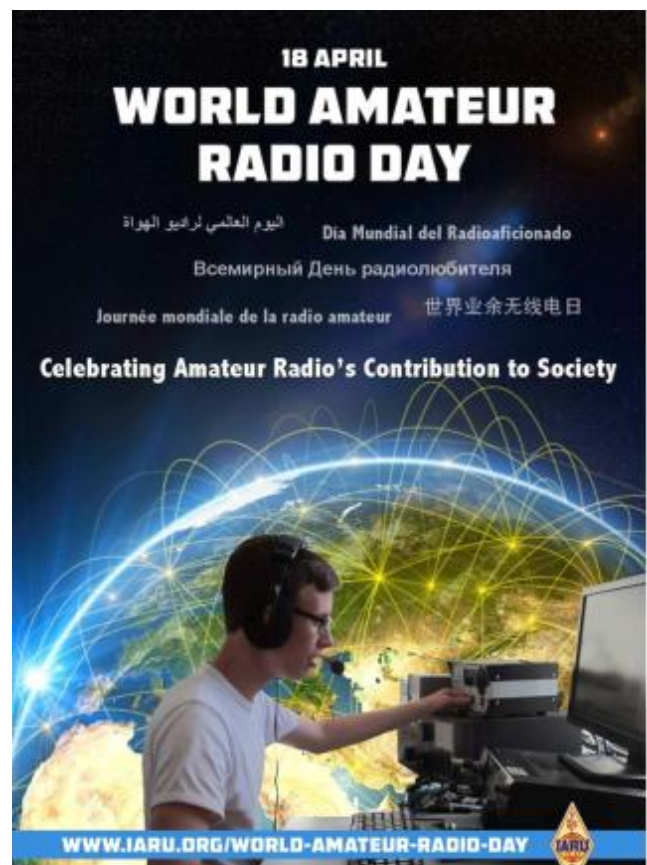
Or just come over to the FLARC clubhouse!!

World Amateur Radio Day Is Coming! • Tuesday, April 18th!

The clubhouse will be open from 2PM until closing for this annual operating event (not a contest). We are seeking volunteer operators and may look to set up a schedule so we can keep the station on the air.

This is a casual event to promote amateur radio in recognition of the creation of the IARU (International Amateur Radio Union) in Paris in 1925.

The club will follow all borough COVID-19 requirements for this event.



The Fair Lawn Amateur Radio Club

Why Is FLARC New Jersey's Most Exciting Radio Club?

Events

- Field Day
- Winter Field Day
- World Amateur Radio Day
- Portable Days
- Earth Day
- Special events
- Memorial Day parade
- Independence Day fireworks
- Fair Lawn Street Fair(s)
- Ham fests/Auctions
- Foxhunts
- Contests
- Field trips
- Annual holiday party
- ...and more!



There Is Something Every Night At FLARC!

- Monday: Near and Far Net
- Tuesday: DMR Net
- Tuesday: "Pop Up" Open House/Open Zoom
- Wednesday: ARES/RACES Net
- Wednesday: Health and Welfare Net
- Thursday: Tech Net (with BARA)
- Friday: Kawfee Tawk Speaker Series (monthly)
- Weekends: POTA and other station activations

There is Something for Everyone at FLARC!



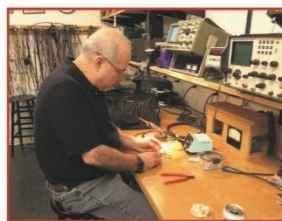
Special Interest Groups:

- Portable Ops: POTA, SOTA, etc.
- DX: Chase the rare ones
- Digital Voice: DMR and other digital modes
- FT8: And other WSJT modes
- Satellite: Also, for weather GPS interests
- Monitoring: SWL and other general listening
- And others to come!!



Plus:

- Monthly VE Testing
- An active repeater – W2NPT (linked with NJ2BS)
- New equipment in the shack
- New antennas on the roof
- A five-position operating clubhouse
- Over 72 consecutive months of speaker programs to learn and grow.



That's why FLARC is the best club around!!

Join us in our in-person and in our Zoom Room for more activities, speakers, and projects to come!

FLARC is following Covid-19 government guidance closely and all events and activities will adhere accordingly to the latest advice.

The Club Fair Lawn ARC is the fastest growing ham club around, with five operating positions in a permanent clubhouse. Visitors and guests are always welcome. The club is open every Friday night, except when there is a Kawfee Tawk scheduled, from NLT 6:30 PM. Business meetings are the first Friday of the month at 7:30PM.

2023 Officers, Committees and Assignments

President	David Corsello	KD2JIP
Vice President	Lee Smith	KD2DRS
Treasurer	David Gotlib	KD2MOB
Secretary	Jim Jalil	W2KNG
Trustee	Fred Wawra	W2ABE
Trustee	Brian Cirulnick	KD2KLN
Trustee	Steve Rosman	KA2YRA
Field Day	Noel Pagan Steve Rosman Steve Wraga	W2MSA KA2YRA WA2BYX
Member Services Health & Welfare	Judith Shaw	KC2LTM
Marketing	Ed Efchak Nomar Vizcarrondo Jim Cooper Dave Corsello	WX2R NP4H W2JC KD2JIP
Program	Ed Efchak	WX2R
Video/YouTube	Thom Guida	W2NZ
Social Media	Thom Guida Dave Marotti	W2NZ NK2Q
Photographer	Giovanni Lucero	K2GIO
Community Relations	Gene Ottenheimer Dave Gotlib Ed Efchak	WO2W KD2MOB WX2R
Hamfest	Gene Ottenheimer Nomar Vizcarrondo	WO2W NP4H
Education	Bill Kelly Earle "Skip" Barker Paul Brennan	NB1LL KD2BRV N6FB
Net Scheduler	Brian Cirulnick	KD2KLN
Contests	Lowell Vant Slot	W2DLT
FLARC Historian	Fred Belghaus	W2AAB
Webmaster	Jim Cooper	W2JC
Technical	Jim Cooper Paul Cornett Brad Kerber Fred Wawra	W2JC W2IP KM2C W2ABE
RACES/ARES Director	Dave Gotlib	KD2MOB
RACES/ARES Liaison	Steve Wraga	WA2BYX
Newsletter Editor	Ed Efchak	WX2R
Newsletter Publisher	Jim Cooper	W2JC
Quartermaster	Brian Cirulnick	KD2KLN
W2NPT Trustee	Paul Cornett	W2IP
NK2H Trustee	Ed Efchak	WX2R

President serves as ex officio to all committees

Satellite Special Interest Group Update

Satellite-SIG@FairLawnARC.groups.io

A Special Interest Group SIG for those interested in amateur radio satellites, as well as others like weather, GPS, etc..

We welcome everyone interested in all types of satellite communications. Some interests are AMSAT, ARISS, receiving weather maps from satellites, APRS via ISS, and much more.

Status of ISS ham radio stations as of February 23, 2023:

Columbus Module radio:

Kenwood D710GA (CONFIGURED) mode is for cross band repeater (145.990 MHz up {PL 67} & 437.800 MHz down). It is powered off during docking and undocking of crafts.

Service Module radio:

Kenwood D710GA (CONFIGURED) mode is for packet operations APRS (145.825 MHz up & down). It is powered off during docking and undocking of crafts.

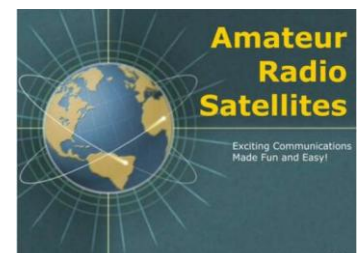
For current status of ARISS:

<https://www.ariss.org/current-status-of-iss-stations.html>

For those interested in joining Satellite-SIG, just go to the club website www.FairLawnARC.org and use the "Join Special Interest Group(s)" link on left.



Preparing to make QSOs via satellite repeater.



2023 FLARC Kawfee Tawk Programs

Date	Presenter	Program
January 13, 2023	James Gallo KB2FMH	What It Takes to Produce A DXpedition
February 17, 2023	Ron Block NR2B	Grounding the Ham Radio Shack
March 24, 2023	Ed Efchak WX2R	The FLARC Member Survey
April 21, 2023	Dave deCoons WO2X	An Overview on Operating Flex Radios
May 19, 2023	Ron Wilcox KF7ZN	A Visit to the Sun and the Ionosphere
June 2023		
July 2023		
August 2023		
September 2023		
October 2023		
November 2023		
December 2023		



Hidetsugu Yagi's 130th Birthday Google Doodle

Follow FLARC ON THE WEB

Facebook: <http://facebook.FairLawnARC.org>

Twitter: @FairLawnARC

Blog: <http://blog.FairLawnARC.org>

Youtube: <http://youtube.FairLawnARC.org>

Website: <http://FairLawnARC.org>

SIG Group Participation as of March 27, 2023

Here is an update on the roster of Special Interest Groups...many groups have increased in size during the last month. About 45% of all members have joined at least one group.

EMCOMM	12
Contesting	14
Digital Voice	33
Monitoring	28
DX	19
FT8	24
Satellite	20
Portable Ops	48
Raspberry pi	7
Direction Finding (NEW)	5
FLARC General	169

Sign up for a group... or ...
why not start one?

Contact webmaster@FairLawnARC.org
if you would like to start a new
Special Interest Group.

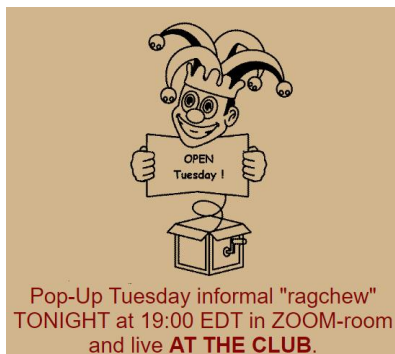
The Clubhouse Is Open Four Fridays In April!!

Date	Clubhouse Status
April 7	OPEN
April 14	OPEN – Business Meeting
April 21	OPEN – Kawfee Tawk at club
April 28	OPEN



**Pop-Up Tuesdays are now in-person at the club
as well as in the Zoom-room.**

The club will follow all borough COVID-19 requirements for these events.





AMATEUR RADIO TESTING BY THE FAIR LAWN AMATEUR RADIO CLUB

On April 15, 2023 the Fair Lawn Amateur Radio Club will continue amateur radio test sessions on a modified basis.

These sessions will be held at the Fair Lawn Amateur Radio Club.

The location is at 10-10 20th Street, Fair Lawn, NJ

The session starts at 9:15 AM.

A document will be provided to you prior to the date to indicate the time assigned to you.

You must have it with you to take the test.

Prior to Testing:

Send an email to wo2w@arri.net requesting to book your spot.

PRE-REGISTRATION IS REQUIRED - NO WALK-INS ACCEPTED.

Upon Arrival:

You must have a government issued ID such as a valid driver's license or passport, a filled out Form 605, and 3 filled out copies of the FCC CSCE form.

Please Bring With You:

You MUST bring and WEAR personal PPE items including a face mask.

2 pens and 2 pencils. None will be provided to you, due to possible virus transmission.

Your FRN number, and (if licensed) a copy of your ham license or a valid CSCE (Certificate of Successful Completion Exam).

Additionally, the \$15.00 exam fee. This is payable in cash (exact amount is a must).

For information and scheduling, please contact:

Gene/WO2W

WO2W@arri.net

Visit our website at www.FairLawnARC.org and <http://bit.ly/FLARC-Testing>



Introduction to Using our Flex Radios Including the Integrated 403A “Ecosystem” April 21st **FLARC Kawfee Tawk™ Series**

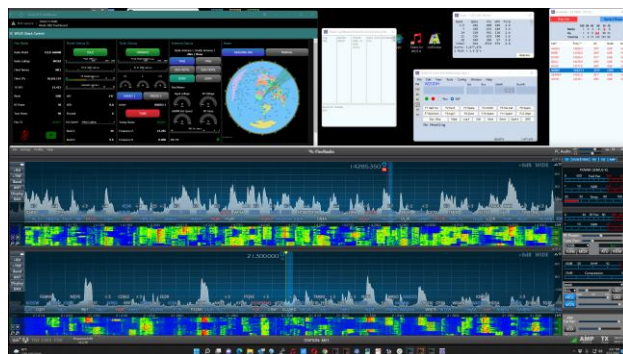
This month's Kawfee Tawk WILL be held in-person at the FLARC club station, because it will be a “hands on” introduction to using the two high-quality Flex radio systems we have at the club — at Position 1 and Postion 4.

We hope to also be able to provide Zoom video as well, for those who cannot be present that Friday evening.

Our presenter will be Dave De Coons WO2X, who represents Flex Radio and is intimately familiar with their equipment as well as the various ways it can be configured and used.

Dave was first licensed in 1983. His introduction to ham radio was on local 220 MHz repeaters where he met his Elmer Dave, K2EE (former WA2VKH). Young Dave would go over to K2EE's shack and get on HF and has been hooked ever since.

Dave is an avid DXer, a member of the FRC contest club, and President of the North Jersey DX Association. He is active on the HF bands. Dave is also very active with the *Node-Red for the Ham Radio* group, which leverages Node-Red programming tools to enhance remote station operation.



**This video program via Zoom will be held on
Friday, April 21st, 2023 beginning at 7:30 PM EDT.**

The program will last about an hour and will include an opportunity for questions and comments. The link to the presentation can be found here:

Join Zoom Meeting on web

Meeting ID: 871 9030 4080

Passcode: kawfee

<https://zoom.us>

Join Zoom Meeting by phone

Meeting ID: 871 9030 4080

Passcode: 400613

Dial: 646 558 8656

Come with your questions and interest, as this topic is one that many have asked for.

***So, save the date – FRIDAY, MARCH 24, 2023 at 19:30 AM EST –
for this important and always timely discussion.***

When you log in, please show your FIRST NAME and your CALL SIGN.

***For more information, please visit the club's website at <http://www.FairLawnARC.org>
or call 201-791-3841.***

Changes In the ARRL Hudson Division

Recent changes in the ARRL Hudson Division have affected two FLARC members.

Ria Jairam N2RJ stepped down as Division Director on 31 March to be replaced by Vice Director Nomar Vizcarrondo NP4H. Nomar recently completed his term as FLARC President with the December 2022 business meeting.

Our best wishes and full support to both.

Special Note: *As non-profit, the IRS now requires that we disclose annually the use of paid lobbyists to our members and indicate approximately what percentage of their dues goes toward that. 0% of your 2021 dues payment will be used by the club to directly pay a lobbyist firm to lobby on behalf of all our members regarding pending legislation that impacts our hobby.*

Earth Day at Great Falls with Special Event Station

The club has made a commitment to participate again at Great Falls National Historical Park in Paterson, with the National Parks Service and the Passaic County School System, in the **Earth Day Clean Up and Science Expo** event.

Schools are beginning to do field trips again and they are looking to put together an event for 2023. The date chosen is **Wednesday, May 24th**.

We are planning a limited event and possibly a Special Event station, with other activities as participation allows.

Follow groups.io for more details.



FLARC to Participate in Hawthorne Environmental Day Event

The club has agreed to participate at Hawthorne High School on Saturday, April 22nd to promote the club and amateur radio.

We participated in their October event last year and had a great time!!

Get Direct With FLARC!

Here is a direct link to specific club info: just a click away!

<http://apparel.FairLawnARC.org>
<http://auction.FairLawnARC.org>
<http://blog.FairLawnARC.org>
<http://calendar.FairLawnARC.org>
<http://events.FairLawnARC.org>
<http://exams.FairLawnARC.org>
<http://facebook.FairLawnARC.org>
<http://news.FairLawnARC.org>
<http://swap.FairLawnARC.org>
<http://tech.FairLawnARC.org>
<http://youtube.FairLawnARC.org>

<https://groups.io/g/FairLawnARC>



Online License Testing!

Are you looking to get your license or upgrade without leaving your home? All you need is a laptop computer with a video camera.

There are number of sites listed on hamstudy.org/sessions These folks will walk you through taking an exam online.

I have worked with both WB5QNG and AA7HW. If you have any questions, please contact me at mStevenk2sab@gmail.com

73,
Steven Boston K2SAB

Vast Archive of FLARC Activities and Info

Members are reminded that we have a large archive of YouTube videos of our previous many years of Kawfee Tawk™ presentations, which cover many aspects of ham radio. Our mostly unsung hero club videographer, Thom W2NZ, has spent thousands of hours of his own time creating really professional quality videos of these 167 presentations. Visit our club YouTube page and you will see all of them listed on the main page, at <http://youtube.FairLawnARC.org>

Another large and rather unused archive is that of our seven years of the club newsletter, The Resonator. They provide a nice historical record of the many activities of FLARC over the years, as well as lots of useful info about ham radio and electronics. The entire archive is at <http://newsletters.FairLawnARC.org>

And don't forget the FILES area of our groups.io website, where useful and important info is saved:

<https://fairlawnarc.groups.io/g/main/files>

Renew Your ARRL Dues... Send Free Money to FLARC!

The ARRL has a great program to support affiliated clubs in that it sends part of your dues back to the club if you renew through the club.

So... when you get your ARRL renewal, send both your check and your renewal application to David KD2MOB, our trusty Treasurer, who will take care of getting your renewal to Newington and a fat check for \$5.00 back to FLARC.

Nothing can be simpler...
you just have to remember!!

*Print and use the
form on page 55
of this issue of*

The Resonator



Club Apparel — Get Them While They're **RED**!

Club apparel is always in vogue. Red is always "in" and your club friends all have them... you *want* a shirt or jacket for the next FLARC event! Great for Field Day!

Don't forget.... they're easy to order.

Go to www.hamthreads.com

or visit <http://apparel.FairLawnARC.org>

Check out the item selection that is posted on the FLARC website (with pictures and prices). Order the shirts or other items you want with either the regular FLARC logo or the still-cool 60th anniversary logo. Note: **RED** is the primary and preferred club standard shirt color.

And why not WEAR your nice red shirt when you come to the club, especially for meetings and events.



It's easy to spot FLARC members
with their red club shirts !

Ham Radio Is Contagious And It Won't Make You Sick!!

2023 FLARC Nets On The W2NPT Repeater:

Near and Far Net Mondays at 8PM

W2NPT and NJ2BS Repeaters

The April Kawfee Tawk will be at the Clubhouse!!

Dave de Coons WO2X will be the presenter **in the clubhouse**, at the Flex Radios, as he explains how to operate them, with hints and kinks to better your knowledge of our FB gear.

One night only, starting at 7:30 PM — a special KT for sure!!

**Remember:
Ham Radio Is a Contact Sport!**

BEQUEATHS AND DONATIONS

Planned gifts usually imply the family donation of amateur equipment to the club when someone has become a Silent Key. But it can be more. Club members might consider making a gift through a will or trust; gifts that help provide lifetime income to the club. Consult with your lawyer, estate planner or tax advisor if you feel such a gift is worthy.

About The Club

The Resonator is published monthly and is the official (and only) newsletter of The Fair Lawn Amateur Radio Club. FLARC was established in 1956 and has met continuously since inception. **The club is sponsored by the Borough of Fair Lawn.** The club meets every Friday, except when a *Kawfee Tawk* is scheduled, at 6PM at the club station in The Fair Lawn Community Center, 10-10 20th Street, Fair Lawn, NJ. Business meetings are the first Friday of the month at 7:30 PM at the club, and on Zoom.

Visitors **ARE ALWAYS** welcome at our meetings.

FLARC operates the W2NPT repeater (145.470-PL **167.9**) located high atop the Community Center. The analog repeater is open to all amateurs for use without restrictions.

The club has nearly two hundred paid members. Dues are currently \$25 per year;
\$20 for new members.

Content and opinions expressed by contributors do not necessarily reflect the policies of the Fair Lawn Amateur Radio Club, its Officers or members. Contributors grant express permission to FLARC to distribute articles in this or any issue of The Resonator. Authors also grant express permission for the use and/or repurposing of these articles, in part or in full, in other publications with credit to the original author and to The Resonator. All material is copyright ©2022. Do not copy or reproduce any of this material without the written permission of FLARC.

Thanks!
for your
Support!!

This is YOUR club.... Be a part of it !!

MARKETING COMMITTEE NEWS

The Publicity Committee is now the Marketing Committee and is working to spread the good words about FLARC and help get all members involved. Interested in joining?
Drop a note to wx2r@arri.net.



**FAIR LAWN'S
COMMUNICATIONS CENTER!**
With Our Antennas On The Roof!



Blood Donors Needed In This Time Of Emergency

The Red Cross and related organizations are in great need for blood donations since most corporate blood drives have been cancelled. This has become acute recently. Especially in these days of Covid.

[Communitybloodservices.com](https://www.communitybloodservices.com)

has a network of offices open during the week and would really welcome folks making appointments to donate blood.



Dear fellow Amateur Radio Operators,

The American Red Cross (ARC) in New Jersey is working on a project where Amateur Radio Operators (HAMs) would support Red Cross internal emergency communications during a disaster. Red Cross sites can be shelters, warehouses, points of distribution, family reunification centers, community reception centers, and other sites where the Red Cross is supporting disaster response and recovery missions.

We are seeking HAMs to support these sites as a backup for conventional communications that may fail during a disaster. This work is in direct support of safety of life and protection of property (47 CFR § 97.403).

Currently, we are only looking for names of operators who would be interested in helping and their location within the state. The how will come after we know the who.

We are looking for HAMs to work as partners, either as an individual or with an organized group (club, ARES, RACES). We are not looking to take anyone away from their other committed roles that they would perform for their communities.

We have split the state into three territories, North-Central-South, each containing seven counties, with communications being provided within the territories and the state.

The Red Cross will provide free disaster training to better understand what we are doing, as well as drills and exercises. Your commitment will be to attend training, drills, and exercises when you are able to and based on your ability to participate at the time that a disaster strikes.

If you are interested in helping or learning more about this opportunity to use your amateur radio license in support of emergency communications in New Jersey, please fill out the form, at the link below.

73, ARC Assist Committee

Ed K2BED • Mike KC2UOA • Peter S, not yet licensed • Bill, NB1LL

Form is at <https://forms.office.com/r/tqmb8cBV3F>

FLARC March 18, 2023 VE Testing Results

With VE testing back on schedule, Gene W02W reports the following results:

Name	Call	License Earned
Laura Gregory	KE2BAM	General
Daniel Klein	KE2BAH	Technician
Wayne Lintoris	KE2ABT	General
William Burke	KD2ZXC	General

Testing for April will be at the Fair Lawn Recreation Center - with "Covid Restrictions."

See page 10 of this Resonator copy, and also the FLARC website for the latest details.

Ten Special Interest Groups [SIGs] Already Formed: Any Others?

A new SIG—Radio Direction Finding—has started under the tutelage of Bob KD2BKD. Club interest continues to grow in the SIGs.

Another recently formed SIG is for those interested in Raspberry Pi and Arduino projects, but now includes DoItYourself (DIY)/Makers kit building, 3D printing and similar topics – also managed by KD2BKD.

A list of all of the current SIGs is shown on page 6.

Other possible groups, from the member survey, include:

- *Radio Propagation*
- *Antennas and how they work*
- *Ham radio software*

Anyone interested in leading any of these groups...?

Please contact webmaster@FairLawnARC.org



Image from May, 1926 QST, courtesy ARRL

The Way We Were

By Fred Belghaus W2AAB

The Art of Homebrew – Part 5

A Gallery of Champions

Last month, we reviewed the homebrew art of the 1950s, and we saw that there was very little change from the 1940s. Since the 1940s, more and more commercially manufactured equipment has found its way into ham stations. This trend has continued ever since. This is no surprise, because ham radio publications rely on advertising revenue to pay their expenses, so when amateurs, especially newly licensed amateurs, leaf through our ham magazines, their attention is drawn to full color ads of shiny new gadgets (without prices).

In response to this “gadget porn,” most of us are seduced into wanting to buy one of those shiny gadgets rather than do the work required to build our own equipment, and learn something in the process. In short, most amateurs today are what used to be called “appliance operators,” who believe that only those shiny new gadgets are what ham radio is all about.

But not every radio amateur is seduced by the full color ads. Some of us still want to build, and learn. Today, there are a significant number of independent minded amateurs who “roll their own,” and take well deserved pride in their efforts. This final installment of our look at the *Art of Homebrew* focuses upon some of our contemporary homebrew artists with examples of their homebrew art. Due to space limitations, I’ve had to omit many other fine examples, but this article will give you an idea of what is being done in this exciting special interest area among radio amateurs.

Today’s Builders – Something Old, Something New

Beginning in the early 1990s, there has been considerable interest in collecting and restoring vintage amateur radio equipment; equipment spanning the greater part of the 20th Century. Collectors specialize in vintage transmitters and receivers, telegraph keys, tubes and vintage microphones, amateur radio literature and old QSL cards. Many collectors also like to repair and restore the radio equipment in order to put these “classics” on the air, not only for the sake of nostalgia, but to honor and give new life to equipment that was made by American manufacturers during the “golden age” of amateur radio and American manufacturing in general.

Continued on next page.

The Way We Were, continued.

In addition to those collecting and restoring equipment, other amateurs have accepted the challenge of constructing their own equipment from scratch, either to build high power phone transmitters and modulators for AM operation, or low power CW transmitters and simple receivers, for those who wish to relive their early days in amateur radio. Still others just build for the sheer enjoyment of the challenge of building, using old or new technology, combining their acquired knowledge, skill, and imagination to produce solid state, vacuum tube, and hybrid equipment. Here is my gallery of champions....

Don Huff, W6JL

Don's home designed and built HF CW rig covers 80 through 10 meters and features "QSK" (full break-in). It uses a pair of 6CL6 tubes driving a pair of 4X150 finals, but it also uses solid state components.

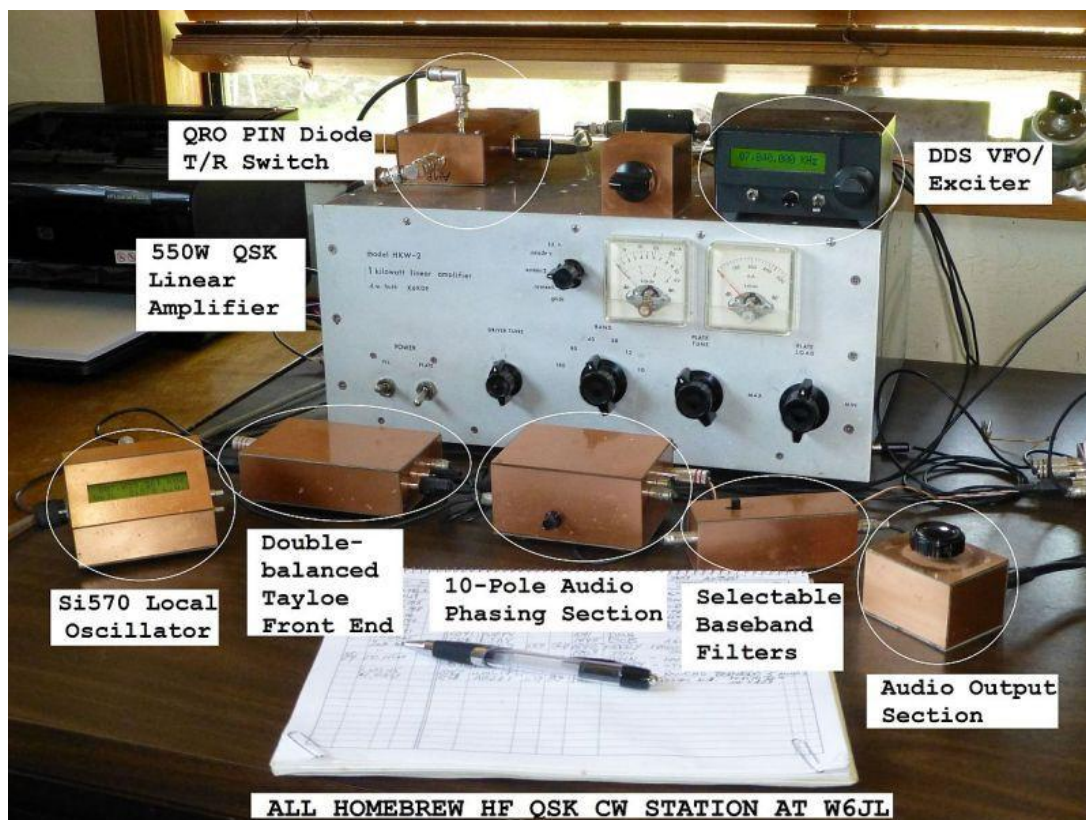


Image: W6JL QRZ page [Used by permission of W6JL and qrz.com]

Chasses are fabricated using blank, double-sided copper circuit board material, soldered together. The VFO is a DDS (Digital) type, using a frequency synthesizer and encoder instead of a conventional variable capacitor for tuning, and the "QSK" (full break-in feature) is accomplished using fast switching PIN diodes.

The Way We Were, continued.

Here's an inside view of Don's high power T/R (Transmit/Receive) switch:

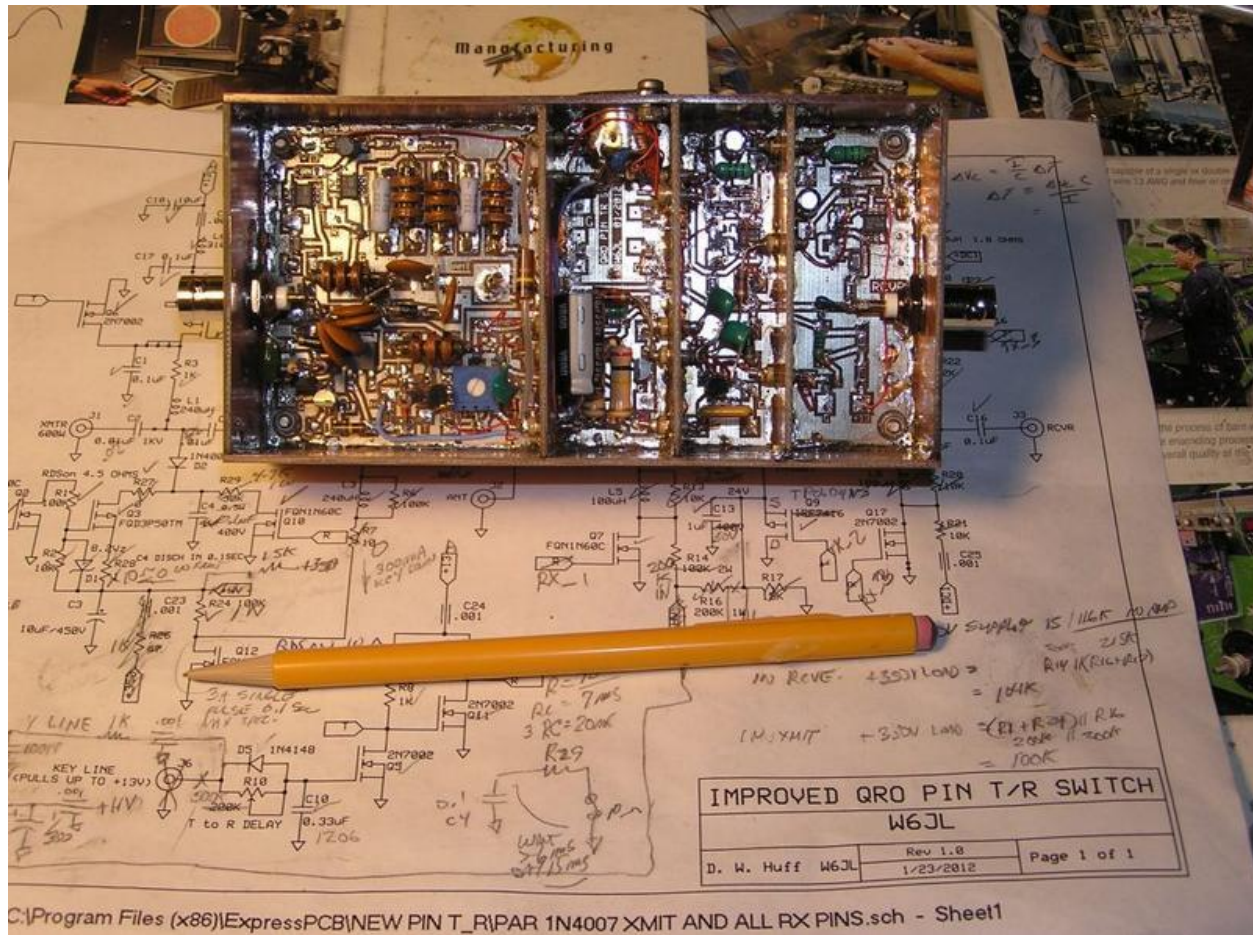


Image: W6JL QRZ page [Used by permission of W6JL and qrz.com]

One of Don's designs appeared in *QST Magazine* as part of the A.R.R.L.'s 2009 "Homebrew Challenge." It was a 50 Watt, 40 meter, MOSFET RF amplifier, whose total cost to build was an amazingly low \$28.00. Don's article later won the challenge as lowest cost to build, and Don's win was reported in the June, 2010 issue of *QST*.

Don has built many projects, and has generously offered to provide PDFs of several of them to any who ask. These include a 4CX250B RF amplifier with a power gain of 10,000, his high power PIN diode "transparent QSK system," a quadrature sampling phasing receiver, an 829B CW 40 meter amplifier with homebrew switching power supply, the high power tube and solid state CW transmitter shown above, DDS VFOs, and others. Don's projects run the gamut from simple to complex, and you can see more details on his QRZ page.

The Way We Were, continued.

Tim Malony, W3TIM

Tim has done some beautiful work with wood as well as metal. Here's a matching set consisting of a regenerative receiver and power supply-speaker, both built in well crafted wood cabinets.



Image: Provided by W3TIM and used by permission

At left is the speaker box that also contains the power supply and an AF power amplifier using a 6L6. The power supply uses a full wave rectifier circuit, capacitor input filtering, “big” bleeder resistors; D.C. output voltages are regulated. The receiver is on the right (more details about it to follow). Both enclosures include pull handles that facilitate removal for servicing or possible modifications.

The large dial on the receiver is one of the National Radio Company's famous “HRO” dials and is known as their type “NPW” dial assembly. The “NPW” dial uses a rotor shaft perpendicular to the front panel, and it includes a mechanical counter mechanism, but actual frequency readout is digital (white slot just above the big dial), powered by an under-chassis frequency counter.

The Way We Were, continued.

Here's an inside view of the receiver:

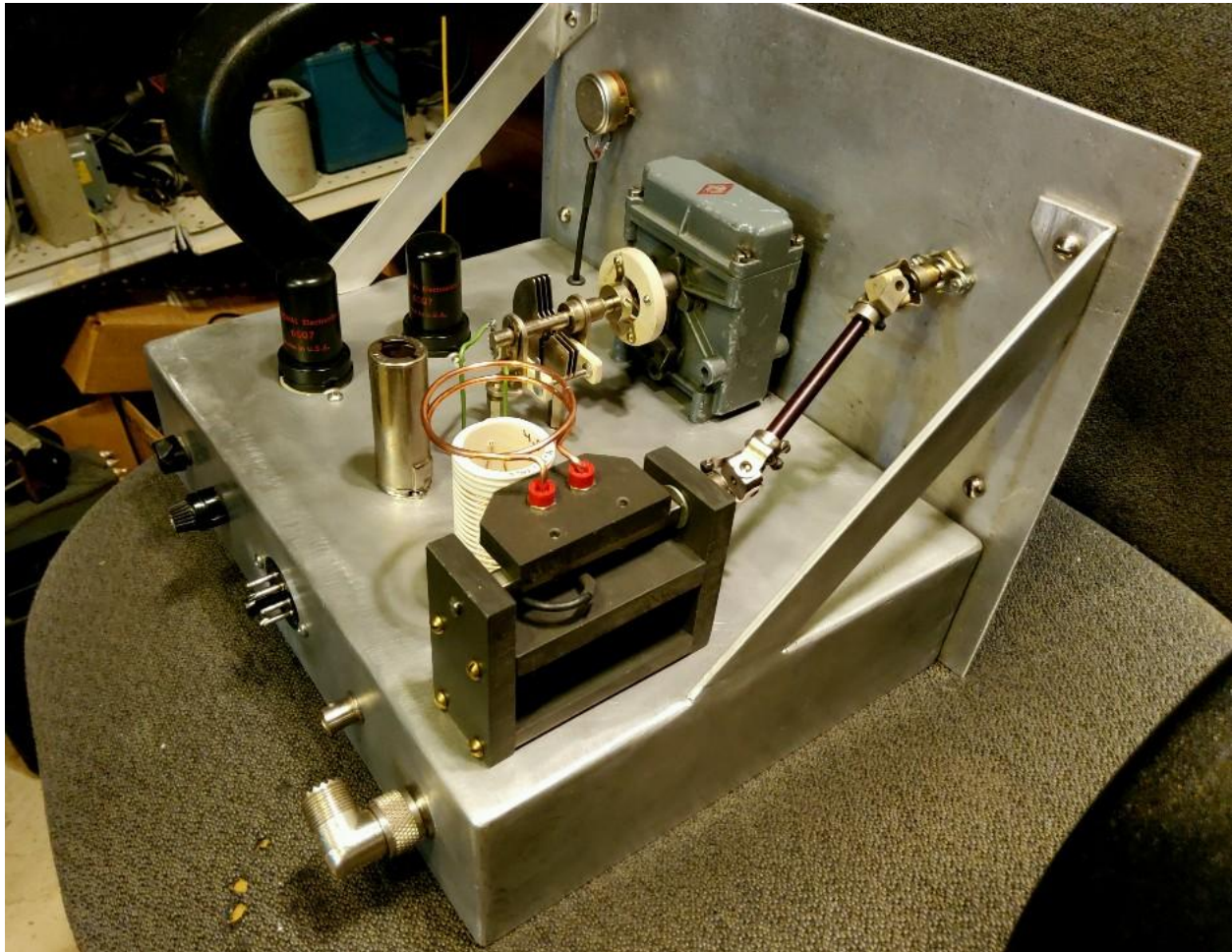


Image provided by W3TIM and used by permission

The rear chassis of the receiver includes a potentiometer to adjust the plate voltage of the 6C4 detector to the 12 to 14 Volt range. Low plate voltages are best for a regenerative detector, and this potentiometer also allows the operator to adjust detector plate voltage to produce more or less gain, depending on the frequency range. (Low range, lower voltage – higher range, higher voltage). The two black metal tubes are 6SQ7s, and are the first and second audio stages.

The front panel is 1/8 inch thick aluminum, and it is reinforced with a pair of logically situated braces, the ends of which are welded to the aluminum chassis. The rear of the “NPW” dial assembly can be seen in the middle of the front panel. Its shaft connects to the tuning capacitor’s shaft through an insulated coupling. The dark gray assembly on the lower right side of the chassis was built by Tim from some scrap pieces of plastic from servers in a computer room. Though the plastic type is not

The Way We Were, continued.

known, it seems to have good electrical as well as mechanical properties. This clever assembly raises or lowers the primary link coil to adjust for best coupling to the RF coil's secondary in each tuning range. Adjustment is via a front panel control by means of a shaft with flexible couplings. The two small red jacks allow one of three link coils to be selected, depending on the frequency band. One turn for the AM broadcast band, 2 turns for 40 meters, and 3 turns for the highest range.

The rear of the chassis includes a UHF (SO-239) female antenna connector (with right angle adapter installed), a fuse and a BNC connector that will soon be replaced by a grounding lug. The power connector is an octal plug that mates with a power supply cable terminated in an enclosed octal socket from the power supply. Using the socket on the cable from the power supply is an important safety feature, insuring that no high voltages will be exposed when plugging the power cable into the receiver's octal power connector. The power supply is also fused for safety.

How well does this receiver work? Very well, indeed, for a regenerative set. Tim's receiver was based on a design by Bruce Vaughn, NR5Q (Silent Key), but with several innovative modifications. CW and SSB signals can be easily tuned in, and signals remain stable, due mainly to the robust mechanical techniques employed by Tim, as well as some electrical design refinements he also added.

If you'd like to look at Bruce's original design, a three part article was published in *Electric Radio*, Volume 51 (December, 2001), Volume 52 (January, 2002) and Volume 53 (February, 2002). [2] Keep in mind, though, that Tim's modified version is an improvement of the original design.

Regenerative receivers can be fun to build, and can deliver surprising performance, provided the builder employs care in construction, and makes electrical improvements, as Tim has done with his receiver.

Tim was most helpful in providing additional information about his receiver. He even recorded an audio file giving your columnist many other details not on his QRZ page. But Tim has built more than this well constructed receiver.

Here's a nicely designed and built transmitter Tim built using a 6AG7 crystal oscillator driving an 807 final amplifier. The small unit at left is a transistorized and SMT [Surface Mount Technology] chip DDS VFO designed by N3ZI, but built by Tim.

The Way We Were, continued.



Image: W3TIM qrz page [Used by permission of W3TIM and qrz.com]

Tim's transmitter covers 160, 80 and 40 meters, and puts out about 50 Watts "with a clean CW note." He chose not to hide the tubes, RF choke and tapped final tank coil inside the cabinet, so he mounted them in a prominent place on top of his transmitter for all to see and enjoy. The output circuit uses a pi-network that will probably tune most any antenna. That classic Vibroplex gold pinstriped bug adds something extra to the photo. The rig comes complete with the possibility of receiving RF burns from that big coil, about which your columnist is very familiar. It's an experience that homebrewers frequently discover as part of their work, and when they do, they never forget it!

Turning to Tim's interest in low power operating, here's a simple but beautifully built 6AQ5 (one tube) transmitter that puts out about 7 to 8 Watts of CW.

The Way We Were, continued.



Image: W3TIM qrz page [Used by permission of W3TIM and qrz.com]

Tim's matching power supply puts out 270 Volts and includes sufficient voltage regulation to keep his CW note clean and chirp free. Tim provides a link on his QSL.net page to the original circuit, designed by K5DH, with schematic here:

<https://www.qsl.net/k5dh/6aq5.html>

You'll likely find Tim on one of the SKCC (Straight Key Century Club) frequencies, or operating in one of the QRP QSO Parties sponsored by the NAQCC (North American QRP CW Club), or QRP-ARCI (QRP Amateur Radio Club International).

The Way We Were, continued.

“Will” Gravning, KEØZ

Will is another homebrewer without any prejudices about vintage. He builds whatever appeals to him, whether it's a 1929 one tube Hartley oscillator transmitter or a state of the art HF transceiver. Here's his 1929 transmitter:

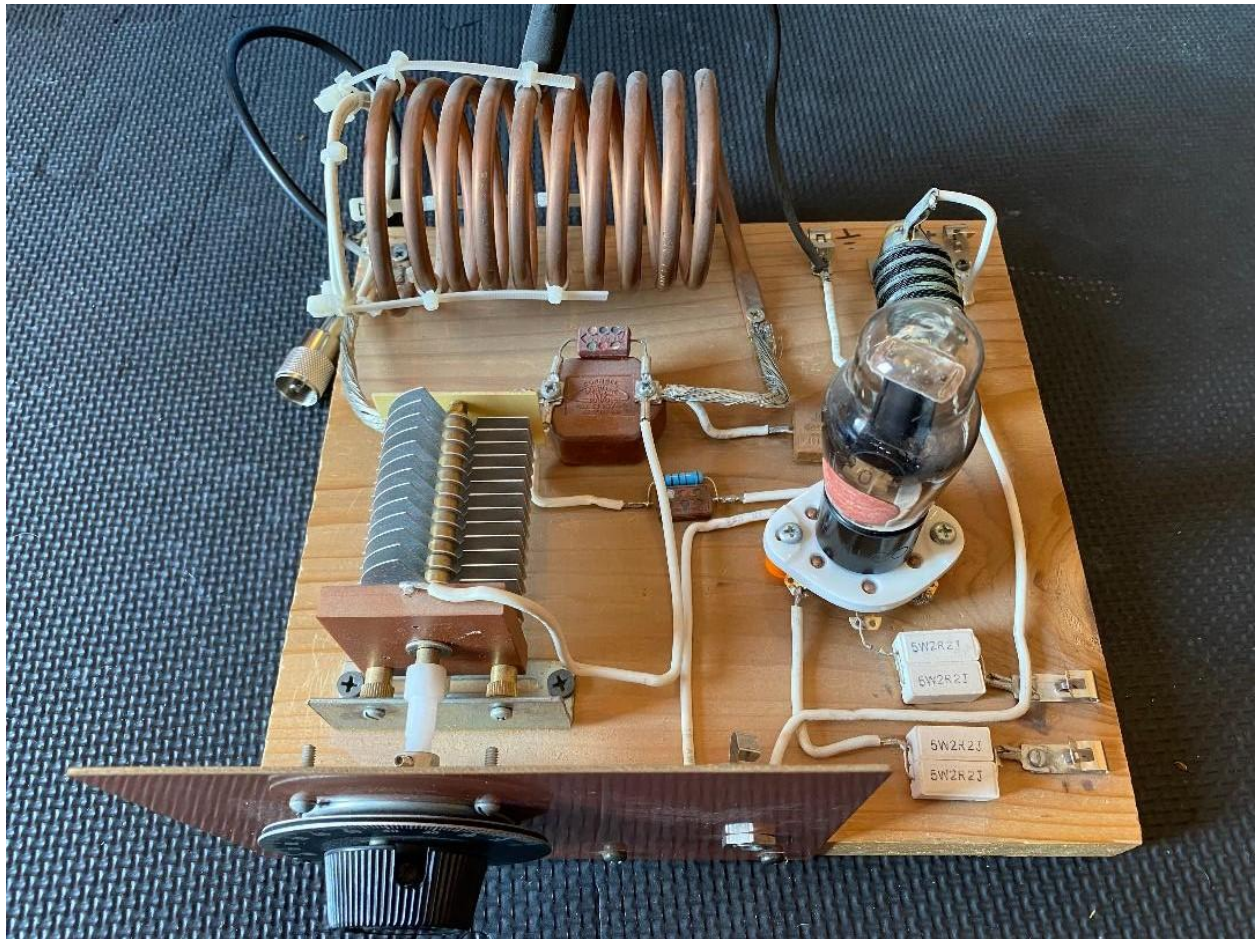


Image provided by KEØZ and used by permission

The tube is a type 27 triode with a 2.5 Volt filament. It is classified as a Detector-Amplifier,[3] and was normally used in simple regenerative receivers. In this application, however, it's used in place of a more usual R.C.A. type 210 or Cunningham UX-310 triode as an oscillator. The small front panel is a piece of copper clad PC board material, which also helps to reduce hand capacity effects.

Will says he's able to get about 2.5 Watts output from the 27 (on 80 meters, I believe). The tank coil is made from quarter inch O.D. soft copper tubing, reinforced with tie-wraps to help reduce mechanical vibration. Mechanical vibration is a major concern in such transmitters, because when the coil and variable capacitor are not secured, the

The Way We Were, continued.

result will be frequency instability. Note that the variable is also firmly secured to the wood “breadboard” with a metal bracket. Tuning is made smoother and more precise by the addition of a reduction drive. Will has reliably worked stations in the “greater North Central states” with this little gem during the annual “1929 QSO Party” sponsored by the Antique Wireless Association.

This rig is also used to demonstrate the basic principles of how a transmitter works at his local club, the Sioux Empire Amateur Radio Club. The receiver Will uses for these 1929 QSO Parties is a Hammarlund HQ-100C receiver, made in the late 1950s.

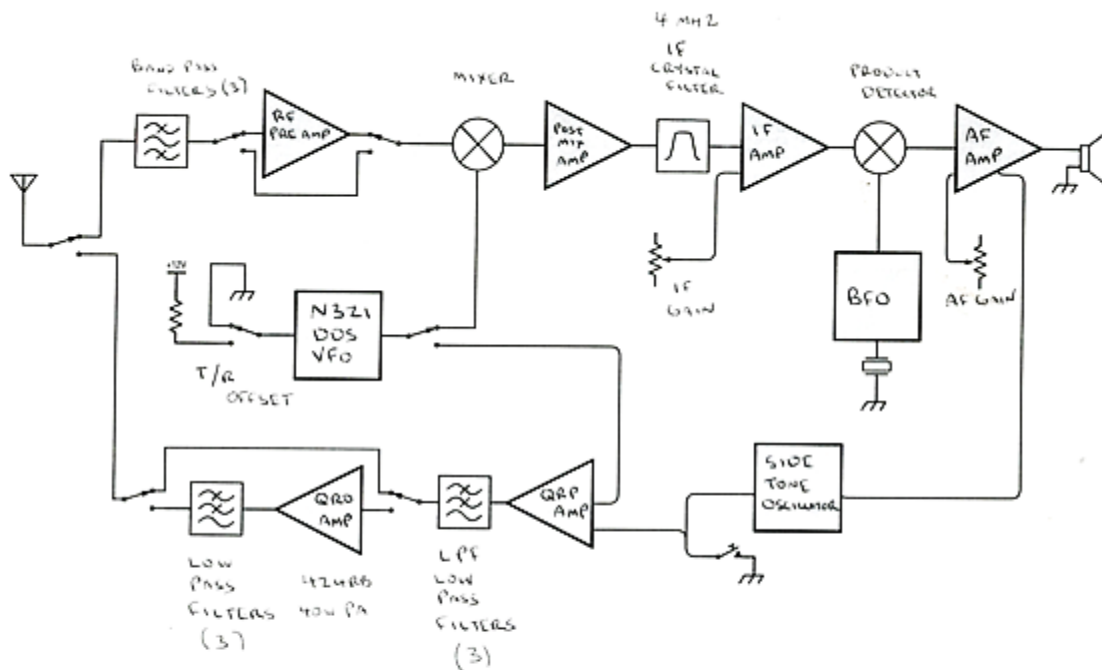
But Will doesn't only build 1929 transmitters. Here's his very nicely constructed state of the art transceiver for 80, 40, and 20 meter CW.



Image: KE0Z QRZ page [Used by permission of KE0Z and qrz.com]

The Way We Were, continued.

Will's fine looking rig features LCD [Liquid Crystal Display] digital frequency readout, a Transmit/Receive switch, "UP" and "DOWN" buttons for fast frequency changes, high or low power positions, and an RF preamp for the receiver. In the transmitter's high power position, the output is 40 to 50 Watts, and in the low power position, 4 to 5 Watts. For the curious, here's a block diagram:



T/R OFFSET

DURING TRANSMIT THE VFO RUNS AT OPERATING FREQUENCY

DURING RECEIVE THE VFO SHIFTS UP ABOVE 4 MHZ (THE IF FREQUENCY)

Image provided by KE0Z and used by permission

Will is no newcomer to amateur radio. He was first licensed in 1969 as WAØWZJ, and prefers operating CW on the HF bands.

The Way We Were, continued.

Dale Parfitt, W4OP

I've been corresponding with Dale for several years now, discussing his homebrew and restoration work with vintage amateur radio equipment, via the QRP-ARCI email group. Dale is originally from 2-land. His first call was WV2YPY (Novice), then WA2YPY in Elmira, New York. If you don't recognize his name or current call, Dale is the man behind PAR Electronics, manufacturer of antenna and filter products, serving both amateur and commercial markets.

Dale has done some truly remarkable work in both homebrewing and restoration of vintage equipment, and I'm proud to share some of his work with you. First, Dale's homebrew 160 through 10 meter all mode transceiver.



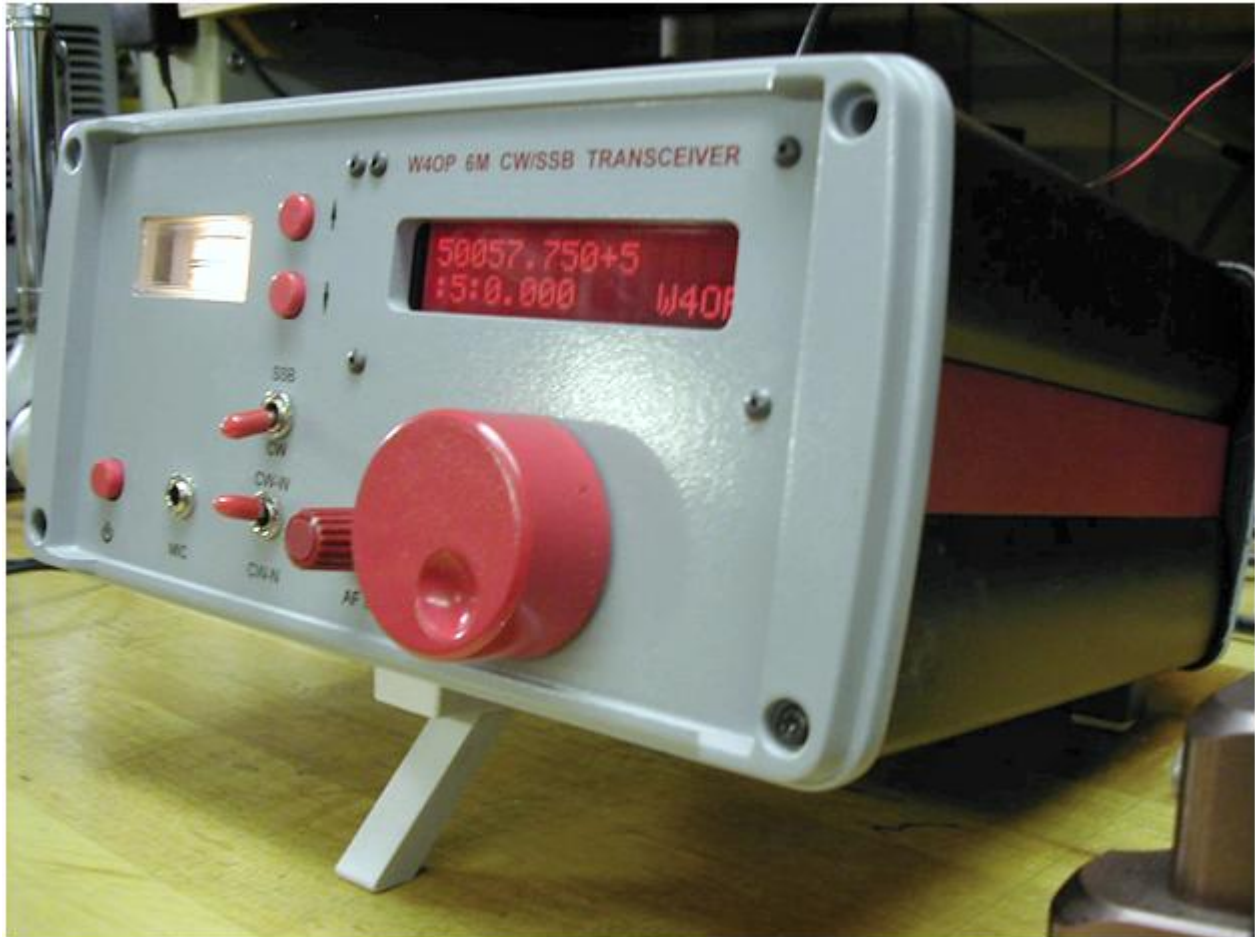
Image: 160-10 Meter All-Mode Transceiver [Used by permission of W4OP and qrz.com]

This neat rig puts out 10 Watts on CW, LSB, USB, and AM. It includes a bright digital frequency readout with fast frequency QSY, a memory feature, and frequency locking. The receiver AGC includes settings for slow, fast, hang, and off. The receiver also includes an RF preamp, provision for a separate receiving antenna, and DSP (Digital Signal Processing).

Dale says this rig is "still a work in progress," and further refinements are expected. (Looks mighty good to me, as-is)!

The Way We Were, continued.

Next among Dale's efforts is a 6 meter transceiver that started life as an MFJ 6 meter rig, but that required extensive modifications to the original DDS VFO circuit to bring it up to Dale's standards. Here's a picture of his version, entirely repackaged and improved:



Dale's repackaged and improved 6 meter rig. [Used by permission of W4OP and qrz.com]

The 6 meter rig operates on CW and SSB, and the receiver includes Narrow and Wide filters for CW. The frequency readout is digital, and may be programmed using the red buttons to the left of the VFO display. The red button at extreme lower left is the power switch.

Dale has always been a fan of 6 meters, and now I will share another of his 6 meter rigs, but this one is for field operating, most likely for "mountain-topping" expeditions. Dale calls it his "6 meter Trail Rig."

The Way We Were, continued.



W4OP's 6 meter Trail Rig [Used by permission of W4OP and qrz.com]

This little beauty also started life as something else, actually two things. Dale says it is derived from an LNR Precision QRP rig and a Ukrainian 6 meter converter. The LNR only tuned as high as 20 meters, so to make the transceiver cover 6 meters it was necessary to change the LC filters for the transverter and the local oscillator crystal for the converter's IF output frequency to 14 Megahertz. The LNR's power amplifier stage was not needed, so it was removed.

The result is a highly portable, SSB and CW rig that runs 5 Watts output, and that runs on a 4400 mAH Lithium Ion battery.

A quick look at the front panel shows that the rig includes digital readout (as always!), Up and Down fast frequency QSY, memory, RIT (Receiver Incremental Tuning), a button to select VFO or memory function, as well as a button for accessing menu options.

The Way We Were, continued.

Now we come to my personal favorite of Dale's homebrew efforts. It's his most ambitious project, in my opinion, and a thing of beauty in every way. It's an all-legacy-band, all mode receiver, which he dubs the PR-8.



Dale's all mode PR-8 Receiver [Used by permission of W4OP and qrz.com]

Although it looks more like a high-end commercially manufactured receiver, the homebrew PR-8 covers 160, 80, 40 (plus the 49 meter Shortwave Broadcast Band), 20, 15 and 10 meters. The 10 meter band is divided into two separate bands. This, too, began as something else; but the result, to me, is nothing short of breathtaking.

Transmitters and transceivers are difficult enough to build today, but a high performance receiver, in my opinion, is even more challenging. Ask anyone who's ever tried to build one. Dale's PR-8 was based on the "Progressive Receiver" designed by Wes Hayward, W7ZOI, and John Lawson, K5IRK, appearing in the November 1981 issue of *QST Magazine*. But looking at the picture of the original "Progressive Receiver" and the one built by Dale, there is very little resemblance. The original *QST* article looks more like one of the "HBR" series receivers by the late Ted Crosby W6TC that appeared in various issues of *QST* from the 1950s to early 1960s. Dale's version is a considerable step above those, both electrically and aesthetically. To me, though it bears traces of the old "HBR" series, it has more the look of what might have been a high-end receiver designed and built by R.L. Drake, as a kind of advanced version of a 2-B or R-4 series, or an updated version of the Squires-Sanders SS-1R. Let's take a closer look inside and out.

The Way We Were, continued.

First, Dale's PR-8 uses enclosures from a junked Heathkit SB-303 receiver and its matching speaker, but you'd never know it. Both have been entirely re-done, with a very professional and updated look. The "slide rule" type dial is the same, an Eddystone Type 898 of British origin, with a large flywheel driven knob, for super smooth tuning.

Dale added a number of additional features: an S-meter, AM detector, selectable AGC (Automatic Gain Control) and a series of homebrew adjustable notch filters for CW, SSB and AM. To do Dale justice, I will quote his own words on this effort from a recent email:

"I warped the BFO crystal oscillator to place the desired signal in the filter passband. The RX [receiver] is single conversion on 80 [Meters] and uses xtal [crystal controlled] converters for all the other bands. Once I added 160 [Meters], I realized that if I added the L.O. [Local Oscillator] and the 160 [Meter] oscillator I could get 49 meters for free.

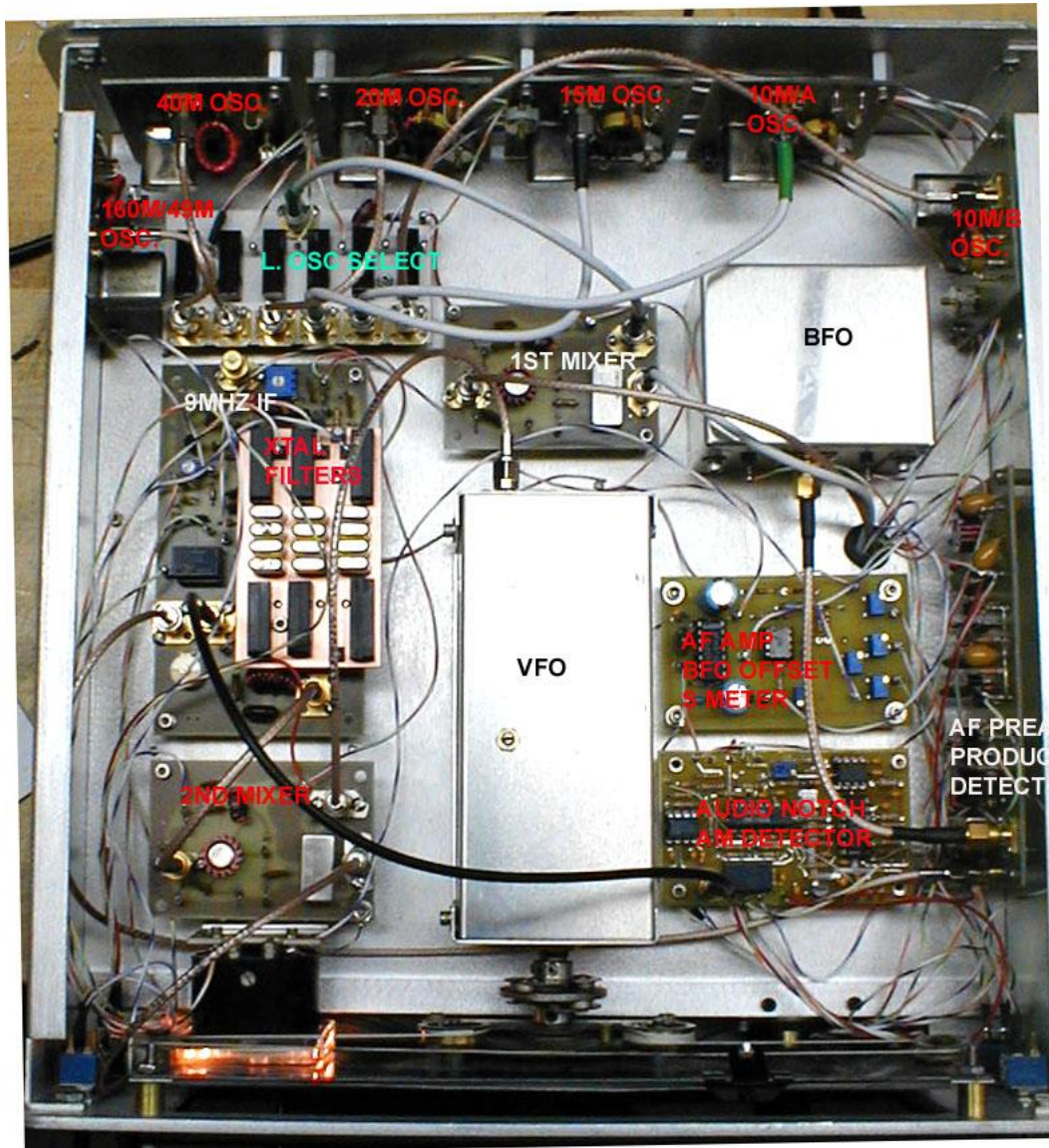
The 2nd mixer (2N5109?) has gain, so the system gain is lower on 80 [Meters] by the amount of 2nd mixer conversion gain. So I added a 2N5109 preamp to the 80 [Meter] chain. The additional gain really was not needed, but it made the S-meter read the same on 80 [Meters] as the rest of the bands.... Lettering is always interesting. On this project I used water slip decals on the base color coat. Then many layers of clear. After each clear coat the panel was wet sanded to gradually eliminate the decal edges."

So much for the outside, but what about the inside? The best way to reveal the secrets of Dale's masterpiece is by providing some pictures, one of which labels the various sections of the receiver's circuitry.

Underside and above chassis views follow...



Underside chassis view, PR-8 receiver
[Provided by W4QO and used by permission]

The Way We Were, continued.

Above chassis view, PR-8 receiver [Provided by W4QO and used by permission]

Dale's work is some of the very best I've seen, and I am pleased to have this opportunity to share some of his work with you. But earlier, I said that Dale's artistry also extends to restoration of vintage amateur radio equipment, and there are some equally stunning examples of these, too.

This one is my personal favorite, a highly professional restoration of the once famous Morrow twins, a matching pair consisting of a transmitter and receiver for mobile use, made in the mid to late 1950s. They are highly prized by collectors, and represent perhaps the pinnacle of amateur mobile equipment in their day. Dale has made them look even "better than new."

The Way We Were, continued.



Dale's restored Morrow Twins [W4OP qrz page. Used by permission of W4OP and qrz.com]

The Morrow Twins shown above are the Model MB-565 transmitter (bottom unit) and the Model MB-6 receiver (top unit) in their gray paint finish. The earlier models (MB-5 and MB-560) were finished in gray hammertone paint. They were made by Morrow Radio Manufacturing Co., Salem, Oregon and covered 75, 40, 20, 15, and 10 meters. The transmitter was plate modulated and used a 6146 final. I would estimate the power output to be about 30 Watts.

You can see much more of Dale's homebrew art here:

<http://www.parelectronics.com/par-homebrew-projects.php>

And for his vintage gear restoration work, here:

<http://www.parelectronics.com/vintage-radio-restoration.php>

The Way We Were, continued.

This month's column has been an exciting one for me, having corresponded with each of the above homebrew specialists, and at the same time, reliving a lot of history. It just goes to show that building and restoring are of interest to many amateurs, and I would encourage all amateurs, beginner to old timer, to plug in that soldering iron, and get to work on a project of your own.

In closing, I offer a final word of encouragement. There is nothing quite like making a contact using a transmitter, receiver, or transceiver that you've built yourself. You can start with a kit, but to really feel a sense of accomplishment, build from scratch. Find an article in *QST*, *CQ*, or one of the Handbooks; then, with patience and a spirit of adventure, dive in. When you have finished building, and tried your creation on the air, you will have moved up to a new level, and soar among the stars. You will also learn a great deal in the process, and that's what amateur radio, and life itself, are all about. I can guarantee that the first contact you make with homebrew equipment will be one you'll remember for the rest of your life.

It has been my privilege to present some of the most talented homebrewers now active in amateur radio, and I wish to offer my sincere thanks to all our contributors for their assistance and permission to use images of their work, thus making this month's column possible. I also wish to thank Fred Lloyd AA7BQ, Founder and CEO of qrz.com, for his gracious consent in allowing images to be reproduced from the pages of qrz.com.

Until next month, 73,
Fred W2AAB

NOTES:

[1] Sharma, Abhishek, "What is Bleeder Resistor and where is it used?" *Circuit Digest*, August 19, 2019, at: <https://circuitdigest.com/article/what-is-bleeder-resistor-and-where-it-is-used>

[2] Stoneback, Jim K4XAF, "NRQ-62 – The Ultimate Regenerative Receiver," *Ron's Radio Heaven*, at: [http://radioheaven.homestead.com/NRQ-62 The Ultimate Regen.html](http://radioheaven.homestead.com/NRQ-62%20The%20Ultimate%20Regen.html)

[3] R.C.A. tube datasheet, at: <https://frank.pocnet.net/sheets/021/2/27.pdf>

[4] Parfitt, Dale W4QO, *Personal correspondence*, March 20, 2023

Ed - itorial : The Tyranny of Habit

Back when I was in the newspaper business, there was always a perennial question that we asked customers—“why do you read *The Record*?”

Think about it; most of you were readers. The answers were always predictable... “local news,” “high school sports,” the comics, the crosswords, and the advertising were all frequent mentions.

All good answers but they were not the correct ones. Sure there were those who took the newspaper for a specific reason; obituaries, classifieds for a job hunt, or perhaps for a sports score.

But for most readers, the answer had nothing to do with the *content* in the product. When you first took the paper, content was the “customer winner”—what need was met that made the initial sale. But the ongoing reason for continued readership for nearly all customers was *habit*. I read the paper today because it was what I did *yesterday*... and the day before that built cumulatively over years. Habit is the “customer qualifier”—why you kept coming back day after day.

The same effect, I dare say, applies to how we interact with other items in our lives. One that is close to home for all of us is our return to the clubhouse. Prior to COVID-19, it was standing room only on most Friday nights. A packed house full of operators and a vibrant social gathering.

No longer. Fridays and Tuesdays are far less member populated. The 2023 member survey indicates that only about half of survey respondents have returned to the clubhouse and of the half that have not, only about half of those (or a quarter of the club) say that they will return at some point in the future. Why won't they come back? COVID-19 uncertainty is one. The distance to travel to the clubhouse is another. Age and health concerns (nearly 10% of the club population is over the age of 80). Having Zoom no longer requires personal attendance at business meetings. No time and lifestyle issues (family, work, caregiving) round out the list.

I would argue that that there is an overarching effect going on here and that is *habit*.

Ed - itorial, continued.

If COVID has changed anything, it broke the habit we had of coming to the clubhouse and visiting our colleagues. Camaraderie is a major reason for being a club member and a lot of that has gone away. The clubhouse is our “customer qualifier” — the most often-mentioned club attribute (after our friendships) and the glue that holds the club together far differently than for those without such an asset. Visit with one and see.

The clubhouse needs our collective attendance to be successful. Use it or lose it. The borough does not view our presence as a given. It is not the home of the privileged few. It belongs to all members to use.

It is imperative that the Council work hard to increase clubhouse attendance. The member survey indicates that members want more open days and a lessened Saturday emphasis on contesting. More training and operating. That falls on the Council to make happen.

— de Ed WX2R

The GREAT FLARC 2023 HAMFEST!!

Save The Date!
Saturday, June 10, 2023



2022-2023 FLARC ACTIVITY CALENDAR

Tuesday, April 18th, 2023

Saturday, June 10th, 2023

June 24 – 25, 2023

World Amateur Radio Day [ops from club]

FLARC Hamfest

Field Day 2023

If in doubt about any event, consult calendar at <https://fairlawnarc.groups.io/g/main/calendar>

Digital Voice SIG Update



DigiVoice@FairLawnARC.groups.io

A Special Interest Group SIG for those interested in Digital Voice modes (Digital Mobile Radio) communications and software.

DMR nets are becoming more active on Tuesday evenings at 7:00pm, Bradmeister TalkGroup 310015 only. Those with DMR radio and hotspot are welcome to join in.

Those who would like to but do not know how, join the group and ask, we will help. We would like to thank Brad for the use of TG 310015.

There is also a FLARC "digital-voice" channel on slack for "real time chat" and a sub-group on our host at

<https://FairLawnARC.groups.io/g/DigiVoice/>

For those interested in joining all the Digital Voice excitement, go to the club website <http://FairLawnARC.org> and use the "Join Special Interest Group(s)" link on the left.

310015
BrandMeister



In A Nutshell



So far, the weather has been getting a bit better even though we have been having arctic blasts every few days. The good part is that the blasts are not the single digit ones like in February but in the low 30s.

This has given me time to start going over and repairing winter damage. Now that it is warmer, the trees can be trimmed to keep them out of the way of my antenna!

Now with daylight time it is harder to get into the net that has the net control operator down in the south end of the country. The good part of daylight savings time is that more work can be done in the evening or later afternoon when it is warmer.

To change the subject completely, in one of my past *Theoretics* columns I wrote about magnetism. An interesting fact that I learned was why magnets attract or repel.

When you bring two magnets with like poles together, they repel each other. This is because the natural state of physics is that energy wants to always return to a lower state, and bringing magnets with like pole together means that you are using energy to do so, therefore raising the energy level and the magnets try to push apart to go back to the lower energy state.

The same thing happens when you bring the magnets with opposite poles together, they attract each other to get to the lower energy state. I brought this up because I find it interesting and thought that I would pass it along.

Anyway, back to getting things outside back in shape - including checking the all important grounding of the station antennas!

73,

Fred Wawra, W2ABE



Radio Monitoring Special Interest Group Update

monitoring@FairLawnARC.groups.io

A Special Interest Group SIG for those interested in SWL and other radio communications monitoring.

Here Is a Challenge to Keep Your AM Radio On

Recently I was reading *SWLing Post* and came across an interesting idea:

"Every year the New Jersey Antique Radio Club has a BCB DX contest for its club members. The main purpose is to encourage the members to put into operation some of the many old AM radios that they own. This year's contest was just completed this past Sunday. For any 24-hour period, using the same radio, you attempt to log the most distant stations. The contest score is the total mileage of the ten stations that are most distant."

This is a fun idea, especially the idea of using mileage as one way to keep score. An SWL group tried it because of hearing about the NJARC club idea and got 13 participants for their first try.

Maybe we can do better!

I'm proposing that FLARC'ers have a shot at something like this (probably in the Fall or early Winter) combining the two ideas. Not a full day of listening but perhaps a couple of hours.

The result could be *The FLARC Medium Wave Daylight DX Challenge*. Since people may have too many activities on a Saturday, maybe we do it on a Sunday. Maybe one that is rainy or snowy... we don't need a lot of lead time on this.

Here are the proposed rules:

Frequency range is the medium wave band: 520-1710 kHz

10 am to 2 pm local time

Any radio with any antenna, but must be the radio at your location (no using remote internet radios)

The listener must hear the signal in real time

The stations must be ID'ed by listening to the signal.

Your report should include:

Your name (or call sign)

Your receiver and antenna (stay with the same setup from beginning to end; if you use multiple setups, provide a separate report for each).

Your location (you could be geographically remote)

The time, the frequency, and the ID of each station heard

The total mileage of your top five most distant stations.

Continued in next column.

Radio Monitoring SIGroup, continued.

Let's keep it simple, but what rules might we add to make it more fun??

As the *SWLing Post* story notes-- this is not a contest; it is a challenge. The reward for every participant will be fun and fellowship.

The member survey says that members want "more events." Here is a simple one that gets many of us old timers back to their SWL roots and finds another band for our rigs.

Let me know what you think...

73

Ed/WX2R

<http://mesamike.org/radio/cdbs/amdb.mvc>

Pick a Frequency:

540

Pick a state:

All States

Show Only This Freq and/or State

FREQ	CALLSIGN	STATE	CITY	PUR-D	PUR-R	PUR-C	LATITUDE	LONGITUDE	STATUS	CALL_LIST
540	WSSC	AL	DAPHNE	2500	19		30.7856	-88.0944		
540	KDKA	CA	CARREL VALLEY	10000	500		38.6680	-121.5414		KPUP, KHON, KIEZ, KSRK, KYAA, KSRK, KNEO, KOBE
540	KVTP	CA	REDDING	2500	14		40.6226	-122.2893		
540	WTLF	FL	PINE HILLS	50000	40000		28.4814	-81.6169		WGTG, WACN, WRTM, WQTH
540	WOMX	GA	COLUMBUS	4000	38		32.4328	-84.9506		WMEY, WSTH
540	KMTT	IA	FORT DODGE	5000	170		42.6958	-94.2092		
540	KDLB	LA	MONROE	4000	26		32.6212	-92.0642		KNOE
540	WQOP	MD	POCONOKE CITY	500	243		38.0531	-75.5697	Silent	WOPV
540	WOTY	MI	SAUK RAPIDS	850	250		45.0850	-84.1392		WOTY, WOTM, WOTI
540	WSSC	NC	SYLVIA	5000	190		35.3912	-83.1489		
540	WETC	NC	WENDELL-ZEBULON	10000	4400		35.8692	-78.4322		
540	WOPX	NH	LAS VEGAS	5000	20		35.5726	-105.1714		WLEX, WLOX, WLEZ
540	WMDR	NY	ISLIP	10000	220		40.7512	-73.2133		WARD
540	WMSX	PA	CANONSBURG	5000	500		40.2821	-80.1853		
540	WYNN	SC	FLORENCE	250	166		34.2181	-79.8083		
540	WCFJ	TN	CLARKSVILLE	4000	55		36.5419	-87.3256		WOMX, WQIT
540	KDFT	TX	FERRIS	1000	249		32.5144	-96.5730		KLCA
540	WMSX	UT	DELTA	1000	13		39.3362	-112.5558	Silent	KDFT, KNAK, KYAR
540	WETJ	VA	REYNOLDS	1000	97		37.0824	-81.7923		WETC
540	WHLX	WI	JACKSON	400	400		43.3333	-88.1531		WYLO, WZER, WYLO, WMRD, WYLO, WMRD

AM: There are 4676 AM stations in the US (FCC report, June 2016). AM band is from 530 to 1710 kHz with 10 kHz step. Maximum power currently allowed is 50 kW for Clear-channel stations. AM is typically used by News, Talk, Sports, Christian and Ethnic stations. 89 stations broadcasting in AM stereo.



Around the Shack

Hal Kennedy N4GG

TLW Transmission Line for Windows

There is a piece of software every ham needs. If you are unfamiliar with TLW (*Transmission Line for Windows*) it's time to get a copy. TLW is a very useful tool that's easy to learn and easy to use. If you are using a transmission line (who isn't?) this simple program will help you determine the performance of your current transmission line and/or pick the best one for your next antenna project.

Transmission Line for Windows (TLW) was written by Dean Straw, N6BV, in 2000. The program has been through several updates; the latest version is 3.24, released in 2014. The program has been stable from the start; the updates have been minor parameter tweaks, not "bug-fixes." If you have an older version it will be okay to use in nearly all cases. The latest release improved the accuracy for ladder line and open wire line. If you plan to work with those lines the latest version is recommended. In most cases you can get a free update at the ARRL web site.

TLW comes bundled with the ARRL Antenna Book. It's a small executable (376 KB) that runs on any version of Windows. When the program starts, the "front page" looks like Figure 1.

TLW, Transmission Line Program for Windows

Version 3.24, Copyright 2000-2014, ARRL, by N6BV, Jan. 31, 2014

Cable Type: **RG-8X (Belden 9258)**

☒ Feet ☐ Meters

Length: **200** Feet **12.424** Lambda Frequency: **50.1** MHz

Use "w" suffix for wavelength (for example, 0.25w)

Characteristic Z0: **50.0 - j 0.38 Ohms** Matched-Line Loss: **2.587 dB/100 Feet**

Velocity Factor: **0.82** Max Voltage **300 V** Total Matched-Line Loss: **5.174 dB**

Source: ☒ Normal ☐ Autek ☐ Noise Bridge

☒ Load Resistance: **50** Ohms ☐ Input Reactance: **0** Ohms

☒ Volt./Current ☐ Resist./Reac.

Graph

Tuner **Print** **Exit**

SWR at Line Input: **1.00** SWR at Load: **1.01** Rho at Load: **0.00382**

Additional Loss Due to SWR: **0.000 dB** Total Line Loss: **5.174 dB**

Impedance at Input: **49.90 - j 0.31 Ohms = 49.90 Ohms at -0.36 Degrees**

Figure 1. Inputs (red) and output (green) for 200 feet of RG-8X

Around the Shack, continued

For estimating the loss in transmission lines, the front page is all you need. The front page is self-calculating. Everytime you change any input parameter the recalculated output appears at the bottom of the page. There is no “calculate” button.

What can the front page of TLW actually do? If you enter a frequency, a transmission line type from a pull-down menu and a length, the program returns a loss number. You can also input antenna impedances other than 50 ohms (1:1 SWR) and see the effects of SWR on transmission line loss.

For those who are rusty on the fundamentals:

Transmission line loss increases as frequency increases

Transmission line loss increases as SWR increases

Transmission line loss increases as line length increases

3 dB loss is half power, i.e.: 100 watts at the transmitter is 50 watts at the antenna.

6 dB loss is $\frac{1}{4}$ power.

Let's take a look at Figures 1, 2 and 3. These are for a 200 foot transmission line for six meters. Figure 1 is for RG8-X, Figure 2 is for RG8A and Figure 3 is for $\frac{1}{2}$ inch hardline.

TLW, Transmission Line Program for Windows
Version 3.24, Copyright 2000-2014, ARRL, by N6BV, Jan. 31, 2014

Cable Type: **RG-8X (Belden 9258)**

Length: **200** Feet 12.424 Lambda Frequency: **50.1** MHz

Characteristic Z0: 50.0 - j 0.38 Ohms Matched-Line Loss: 2.587 dB/100 Feet

Velocity Factor: 0.82 Max Voltage: 300 V Total Matched-Line Loss: 5.174 dB

Source: ☒ Normal ☐ Autek ☐ Noise Bridge

Load: Resistance: **50** Ohms Reactance: **0** Ohms

SWR at Line Input: 1.00 SWR at Load: 1.01 Rho at Load: 0.00382

Additional Loss Due to SWR: 0.000 dB Total Line Loss: 5.174 dB

Impedance at Input: 49.90 - j 0.31 Ohms = 49.90 Ohms at -0.36 Degrees

Figure 1. Inputs (red) and output (green) for 200 feet of RG-8X

TLW, Transmission Line Program for Windows
Version 3.24, Copyright 2000-2014, ARRL, by N6BV, Jan. 31, 2014

Cable Type: **RG-8A (Belden 8237)**

Length: **200** Feet 15.436 Lambda Frequency: **50.1** MHz

Characteristic Z0: 52.2 - j 0.18 Ohms Matched-Line Loss: 1.423 dB/100 Feet

Velocity Factor: 0.66 Max Voltage: 3700 V Total Matched-Line Loss: 2.846 dB

Source: ☒ Normal ☐ Autek ☐ Noise Bridge

Load: Resistance: **50** Ohms Reactance: **0** Ohms

SWR at Line Input: 1.02 SWR at Load: 1.04 Rho at Load: 0.02175

Additional Loss Due to SWR: 0.001 dB Total Line Loss: 2.847 dB

Impedance at Input: 51.34 - j 0.95 Ohms = 51.35 Ohms at -1.06 Degrees

Figure 2. Inputs (red) and output (green) for 200 feet of RG-8A

TLW, Transmission Line Program for Windows
Version 3.24, Copyright 2000-2014, ARRL, by N6BV, Jan. 31, 2014

Cable Type: **1/2-Inch 50-Ohm Hardline**

Length: **200** Feet 12.577 Lambda Frequency: **50.1** MHz

Characteristic Z0: 50.2 - j 0.08 Ohms Matched-Line Loss: 0.566 dB/100 Feet

Velocity Factor: 0.81 Max Voltage: 2500 V Total Matched-Line Loss: 1.132 dB

Source: ☒ Normal ☐ Autek ☐ Noise Bridge

Load: Resistance: **50** Ohms Reactance: **0** Ohms

SWR at Line Input: 1.00 SWR at Load: 1.00 Rho at Load: 0.00221

Additional Loss Due to SWR: 0.000 dB Total Line Loss: 1.132 dB

Impedance at Input: 50.17 + j 0.08 Ohms = 50.17 Ohms at 0.10 Degrees

Figure 3. Inputs (red) and output (green) for 200 feet of $\frac{1}{2}$ inch hardline

You don't need to know the characteristics of these transmission line types - you simply select them from a built-in menu. Thirty-three of the most common transmission line types are there to choose from. There is also an “other” option where you can define a transmission line not in the menu.

Here are the results from Figures 1, 2 and 3 — assuming 100 watts at the transmitter.

I have added a few additional transmission line types not shown in the figures:

Cable type	Loss	Loss	Power at the antenna	
SWR:	1:1	2:1	1:1	2:1
RG-8X	5.2 dB	5.6 dB	30 W	28W
RG-213	3.1 dB	3.5 dB	49W	45W
RG-8A	2.8 dB	3.2 Db	51W	48W
LMR-400	1.8 dB	2.1 dB	66W	62W
$\frac{1}{2}$ " Hardline	1.1 dB	1.3 dB	78W	74W
$\frac{1}{2}$ " Helix	0.9 dB	1.1 dB	81W	78W

Fig 1

Fig 2

Fig 3

Around the Shack, continued

From the table it's easy to see "you get what you pay for." RG-8X would be a poor choice for a long transmission line on six meters. RG-213 and RG-8A are better, with loss around 3 dB. Can we do better? Sure, but attaining lower loss comes with costs. The cost of the cable goes up, and the difficulty of working with larger cables is higher. Hardline in particular is difficult to work with and requires special connectors.

The decision in this case, as in most cases, is up to the designer. You can use low cost cable and accept the loss, or spend the money and expend the installation effort by going with "the good stuff." TLW provides the information you need to make a decision, but it won't decide for you!

I created the loss data in the table in about five minutes. The cables were in the pull down menu. I made the change from 1:1 to 2:1 SWR by changing the Resistance value of the load (antenna) from 50 ohms to 100 ohms. As an aside, with 100 watts input to a coaxial cable and 30 watts output, where does the missing 70 watts go? The lost power is converted to heat. Try running RG-8X at 1,500 watts sometime. It gets noticeably warm and may or may not fail – depending on the SWR and the cable's manufacturing details. There is a prior *Around the Shack* column on this.

Let's use TLW to take a quick look at an age-old, practical (read: not hypothetical) question. 75 ohm CATV hardline is often available for free or at deminimus cost. Should we use it? The price is right. If we accept the CATV company's largess, what's the best way to deal with the 75 ohm to 50 ohm mismatch at the transmitter, and again at the antenna end of the line? Here is transmission line loss data comparing 50 ohm hardline to 75 ohm hardline with no matching at the ends. For the 75 ohm hardline we'll accept the mismatch and the 1.4:1 SWR:

28 MHZ, loss in 200 feet of transmission line

½ inch 50 ohm hardline	SWR 1:1	0.81 dB
½ inch 75 ohm hardline	SWR 1.4:1	0.87 dB
7/8 inch 50 ohm hardline	SWR 1:1	0.51 dB
7/8 inch 75 ohm hardline	SWR 1.4:1	0.55 dB

144 MHz, loss in 200 feet of transmission line

½ inch 50 ohm hardline	SWR 1.1	2.1 dB
½ inch 75 ohm hardline	SWR 1.4:1	2.2 dB
7/8 inch 50 ohm hardline	SWR 1:1	1.5 dB
7/8 inch 75 ohm hardline	SWR 1.4:1	1.6 dB

It only took a few minutes to generate the above data using TLW. What do we see? 75 ohm cable is perfectly good for amateur use without using 50 to 75 ohm matching on the ends. Using the cable with the mismatch only costs about 0.1 dB of additional loss.

I'll give this case further examination in an upcoming *Around the Shack* column, but suffice it to say:

75 ohm CATV cable is an excellent choice for amateur use, and does not need 50:75 ohm matching on either end.

There are two additional pages behind the front page in TLW. On the front page there is a selection called "Graph" – this brings up a graph of the voltage and current along the transmission line. This is particularly useful when the SWR is greater than 1:1. The peak voltage and current on the line can be higher than you expect.

A second feature in TLW is its ability to calculate matching networks. To use this feature, set the source location

Around the Shack, continued

from “load” to “input” (or set the transmission line length to less than one foot) and select “Tuner.” A table of assumptions appears. Typically the only value in the table I might change is the power level, although the default is 1,500 watts and it’s interesting to see what the matching network is going to have to handle at that power level.

Low-Pass L-Network

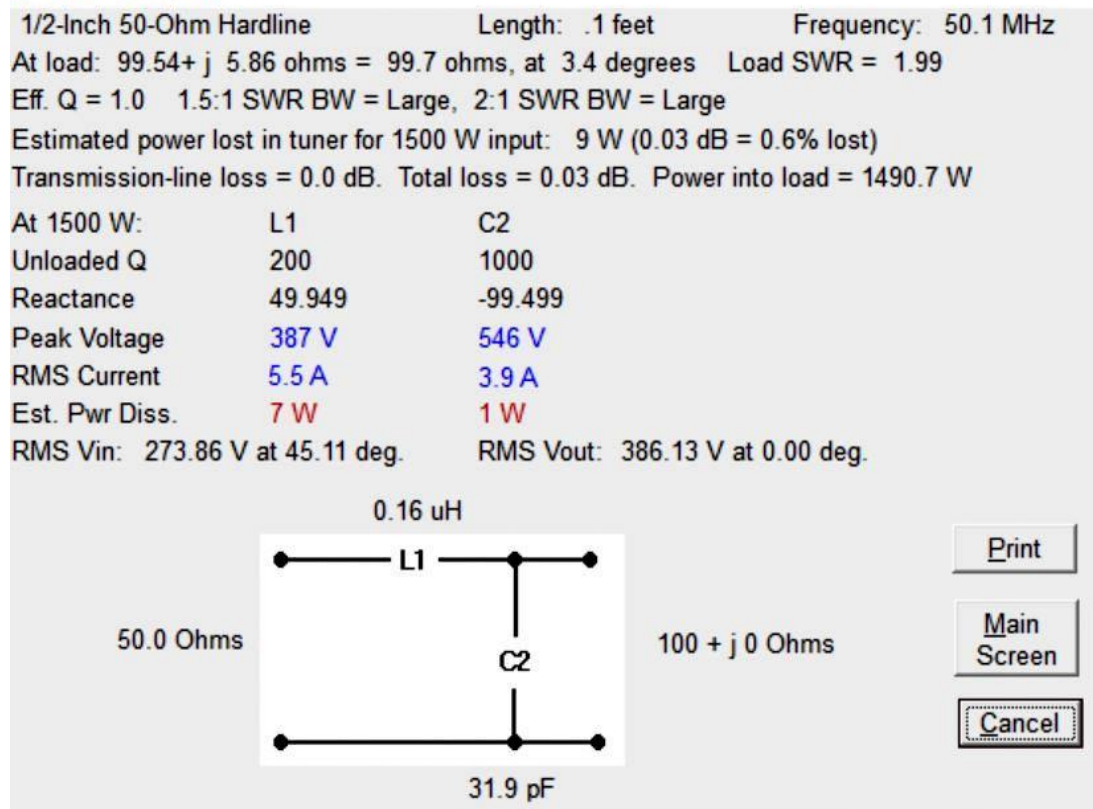


Figure 4. TLW produced Lo-Pass matching network for a 100 ohm load at 50.1 MHz

Figure 4 shows a Low-Pass L-network TLW created to match a six meter antenna’s 100 ohm resistance (SWR = 2:1) to 50 ohms. The power is 1,500 watts. Note the peak voltage across the inductor is nearly 400 volts and the peak current through the inductor is 5.5 amps. Using reasonable assumptions, the inductor will dissipate about 7 watts. The capacitor will have 546 volts peak across it and 3.9 amps of current flowing through it. I wrote a column some time ago about transmit-quality mica capacitors. This is the place for one of those! The typical junk box capacitor will not handle 3.9 amps at 50.1 MHz – it will let all the magic smoke out!

If you do some “what-ifs” with TLW and look specifically at the network function, you can see some startlingly high voltages and currents at 1,500 watts. This is what high-power antenna tuners have to accommodate internally. High power tuners cost a lot of money and often fail. TLW gives you the data to know why. There was an *Around the Shack* column on QRO considerations four years ago. The data in that column was calculated using TLW.

That’s a quick trip through TLW. The insights provided are worth the minimal effort to get it up and running. Actually, to get it up and running simply requires launching **TLW3.exe**.

I sometimes think I have biased this column too much toward HF over the years. This month’s column is different. You can use TLW to analyze cable loss from below the broadcast band to SHF (frequencies above 3 GHz). Let’s take a quick look at two cases — a 920 MHz repeater and a 132 KHz (2,200 meters) vertical.

I ran these cases using TLW in less time than it took to write them up.

For the 920 MHz repeater case, let’s assume the antenna is 40 feet away from the transmitter (30 foot tower, 10

Around the Shack, continued

feet to get to the rig). This is realistic and there are plenty of 920 MHz repeaters on the air including here in my home base of Atlanta, GA.

RG-8X:	Loss: 5.5 dB (Good thing it's only 40 feet!)
RG-8A:	Loss: 2.8 dB
½ inch Heliax:	Loss: 1.2 dB
1-1/4 inch hardline:	Loss: 0.4 dB

This case illustrate the trade-offs designers have to make. If this transmission line had to be 200 feet long, the only choice would be hardline and the cost would be high. Forty feet of hardline is easy enough to come by - so that's what I would choose. Either bought new or found surplus, 40 feet of hardline is not going to break the bank. The choice seems pretty obvious.

Now let's look at the other end of our allocated spectrum. Here is the case for a 2,200 meter band (132 KHz) matching network with an 80 meter vertical as the antenna. Using EZNEC, the impedance at the base of the antenna is $R = 0.2$ ohms, $j = -9860$ ohms. The antenna is essentially a capacitor.

The SWR at the base is **4176:1**! That's not a typo. The SWR exceeds four thousand to one. I looked at the four matching networks TLW designed to see what might work. Here are the results for Hi-Pass and Low-Pass L-Networks with 100 watts of transmitter power. Vcoil and Vcap are the voltages across the inductor and capacitor. Icoil and Icap are the currents. Pcoil and Pcap are the power dissipated in the coil and capacitor.

Hi-Pass L-Network

Vcoil: 11,285 volts! Icoil: 2.2 amps, Pcoil: 89 watts.
 Vcap: 11,284 volts! Icap: 1.4 amps, Pcap: 11 watts.
 The inductance of the coil is 4,300 uH.
 The capacitor is 214 pf.

Low-Pass L-Network

Vcoil: 19,104 volts! Icoil: 1.5 amps, Pcoil: 100 watts!
 Vcap: 100 volts, Icap: 0.4 amps, Pcap: 0 watts.
 The inductance of the coil is 11,000 uH
 The capacitor is 7,500 pf.

A few things become evident regarding getting on our new 2,200 meter band. First, an 80 meter vertical isn't "enough antenna" to do the job. Next, in either tuner configuration, all 100 watts of the transmit power is being dissipated in the matching network. Nothing is making it to the antenna. This, of course, is not quite correct. That's the answer from a model and in this extreme case the model doesn't have enough precision to calculate the power delivered at the antenna. **It will be something less than 1 watt** – that's close enough to tell us what we need to know.

If you Google 132 KHz transmitters and antennas you will notice something – the inductors used in matching networks are extreme. They are typically hundreds of turns of wire around a 5 gallon bucket, and many have arc and burn marks at the antenna end of the coil. TLW tells us the voltage at the antenna is between 11 KV and 19 KV! At 100 watts of transmitter power, **the antenna is not safe** - not by a long shot. The design and construction of the inductor is an engineering challenge. If you log into the WSPR network, you will only see two or maybe three stations transmitting on the 2,200 meter band at any given time. Now you know why.

TLW is a must-have program. For more information, see the article *Introducing an Improved Version of Transmission Line for Windows Software* by Joel Hallas, (W1ZR), in the June, 2014 QST.

TLW also has an excellent built-in Help File. The Help File and a brief history of TLW are available on the ARRL web site. They are there for everyone, including those who don't own a copy of the Antenna Book.

73,

Hal N4GG

New Product



We'd like to introduce you to our exciting new product. This amazing device is your gateway to pleasant conversations with your neighbors, new friends in cities and towns across the country and around the world. It offers these features:

Ingenious design

Simple to use

Built to last

Parts that won't burn out

Attractive styling

No batteries required

No software required

No computer required

Very few moving parts

Fun for young and old

Children as young as eight have learned to use this wonderful tool, so anyone can, regardless of age with just a little practice. Meet a class of people that are courteous, patient, intelligent, and often quite interesting to know. So why wait? Get yours today!

Available at a Hamfest near you

What Is It? – Answer To Last Month's Question

By: Fred Belghaus W2AAB



I received several responses for this one, and some imaginative, but not quite correct answers.

*The winner, though, is Bill, WA2WL, who came up with the closest and best answer.
So what are they, really?*

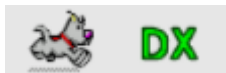
They are felt washers that were placed behind the knobs on radios and such that had wood cabinets, to prevent the knobs from scratching the finished wood or metal surface. These were used in the period from about the mid 1930s through the mid to late 1940s, and possibly later.

I once had a table radio made in the 1930s with a finished wood cabinet that actually used these for the purpose described.

Thanks to all for the responses.

73,

Fred W2AAB

DX Special Interest Group Update**Welcome Spring!****The Vernal Equinox On March 20th**

A solar equinox is a moment in time when the Sun crosses the Earth's equator, which is to say, appears directly above the equator, rather than north or south of the equator. On the day of the equinox, the Sun appears to rise "due east" and set "due west".

<https://en.wikipedia.org/wiki/Equinox>

Notice that the "gray line" is basically vertical on the world map above – this is the day when there is equal 12 hours of daylight and 12 hours of night at all locations on Earth.

The gray line is considered to have very noticeable effects on HF propagation. Often HF signals will peak in strength as the gray line passes over the distant station's location.

— • • • —

Especially for DXers and those working toward various awards for two-way contact with various entities (states, countries, etc.), the ARRL Logbook of the World (LotW) is a very important and useful service. Uploading and matching logs is FREE for every amateur radio operator in the world. (Using matched contacts for awards does incur a very nominal charge.)

At the present time (April 10, 2023) there are OVER 1 billion, 690million QSO records in the system!

Of those, just under 375 million records have been matched on both sides and resulted in a "confirmed QSL" for the contact.

Surprisingly, of all the hundreds of thousands of hams licensed around the world, there are only

170,738 users registered in the system. Just in the USA there are currently 764,949 licensed radio amateurs.

[Interesting to note that there are currently 6172 Novice class licenses valid...]

If you are even thinking of working toward Worked All States, DXCC, or Worked All Zones then you really should be signed up with LotW. If the process of getting started seems daunting, there are many club members who will be glad to help you. Just ask!

For those who ARE signed up and use LotW, and who seek "instant gratification" by checking the status of your uploads and confirmations frequently, you might have noticed in the past several weeks that processing of uploaded logs has been going much slower than in the past. Some causes of this have been identified by the ARRL staff; others are still being investigated. But we users must remember several things about LotW... it is about 20 years old; it was designed and built with hardware and software 20 years ago; for many years (in the past) nothing was done to improve (and in some cases just maintain) the system; those who put it together are no longer around; there is very little documentation of the code or the hardware (long story); we're really very lucky that it is still processing our QSO logs! And also, the "load" on the system has increased tremendously with the advent of FT8/FT4 as well as the awakening sunspots. That's the background.

The reason for this 'editorial' article this month is that the IT staff at ARRL (yes, they do finally have some!) have found some user actions that very likely are loading and slowing the system — and they are spreading the word to users as best they can about these actions. Here are some —

- Many versions of computer-based logs allow EACH QSO to be uploaded separately. Much of the LotW computer time is used reading the header, validating the user, and reporting status of the upload; this time is about the same whether the upload has one QSO, 100 QSOs or 10,000 QSOs. So doing one at a time eats up a lot of "overhead" processing time.
- More than a few users are apparently uploading their ENTIRE log each time they upload to LotW. This means that 80 to 90% of the upload is duplicates, which eat up the processor time but accomplish nothing. The TQSL utility as well as just about all computer

Continued on next page.

logging programs have an option to upload ONLY NEW QSOs, and we should all be very careful to select that option when we upload. Here is one upload file recently shared as an example (the sender's call is not shown):

```
2023-04-10 09:42:56 LOTW_QSO: [Additional QSL notices suppressed]
2023-04-10 09:48:24 LOTW_QSO: Successfully processed 41325 QSO
                                records in 488.013834 seconds
2023-04-10 09:48:24 LOTW_QSO: 46 records were replacements
2023-04-10 09:48:24 LOTW_QSO: 41279 records were duplicates
2023-04-10 09:48:24 LOTW_QSO: 26 QSL records entered
```

So you can see that 99.889% of this log are duplicates; 46 were 'replacements' meaning some data was changed; and out of the 41,325 QSO records, 0.063% resulted in matched & confirmed QSLs. The same could have been accomplished with an upload containing just the 46 records that had some data changed.

- The number of QSO records being uploaded is mind-boggling these days! The ARRL Director of Operations W5OV (who happens to have grown up in NJ with many of our FLARC members, back when he was WA2OVE) posted recently: "Over the past 10 days or so, we have observed receiving thousands of upload files per hour. Sometimes close to 4,000 per hour." Notice that those are FILES, not records – each file can contain from 1 to tens of thousands of records.
- LoTW doesn't just process submitted QSOs. It also:
 - * Processes download requests
 - * Processes DXCC updates
 - * Rejects bad file uploads
 - * Performs housekeeping tasks
- Impatient users upload a file of QSOs and then ask for a report of how many were matched & resulted in a "matched QSL" record. When the system is backlogged it can take a while before that report is generated and sent to the user. If the impatient user doesn't get "instant gratification" they ask for the report AGAIN. Of course, this just adds to the backlog and slows things even more.
- Because the system was created two decades ago, when computer hardware and programming were not nearly as sophisticated as they are today, many of the functions can only run if all the other processes are paused until that process completes (download reports

have been mentioned as one such situation). So ask for a report if you need one, but do not get impatient and keep asking for it over and over again!

The "new administration" at ARRL is not only aware of the problems and backlog of LotW, but they are now actively working to improve it.

There are long-range plans to modernize LotW, but of course that will require funding as well as time. In the meantime, there ARE knowledgeable people at HQ who are working on keeping the existing system perking.

So to be a 'good LotW user' here are some things to keep in mind —

- Encourage other hams to sign up on LotW, and to upload their logs so that OTHERS might get credit for awards they are trying for;
- Avoid uploading QSO records one at a time; batch them by the hour, or day, or week.
- Be patient while the LotW system grinds through the uploaded logs, and don't expect "instant feedback" of 'confirmed QSL' on your needed contact;
- Double and Triple check whatever you are using to upload your QSO info to be sure that it sends ONLY NEW records, and not your whole log every time;
- If, for some reason, you decide you need to upload a gigantic log (maybe you just put into your computer log all the info from paper QSLs going back to 1950...), BREAK UP the upload file into sections of maybe 5Kb in size and upload them one at a time over a period of time. This will allow the LotW system to work on other people's logs in between yours, instead of them having to wait 10 hours for one upload file to finish processing. If you need help on how to do this, ask on groups.io;
- If you operate from different locations or grid squares, and want your contacts to get credit for that location, then you must be sure that your logs have the correct location information. Probably the most direct and surest way to do that is to use TQSL for prepping your log file, and use a different Station Location certificate for each location. Yes, it's a bit of a pain – but you are doing it "for the other guy." If you need help on how to do this, ask on groups.io

— Jim W2JC



FLARC PortableOps SIG

PortableOps@FairLawnARC.groups.io

This is a Special Interest Group (SIG) for members interested in portable ham radio operation such as POTA, SOTA, IOTA, LOTA, etc. The purpose of this SIG is to get outdoors and practice our operating skills from different places. We can share outing experiences, tips and work on our operating skills.

A lot of our reports for this SIG have focused on POTA (Parks On The Air) activities of our group, but there are other aspects of portable operation that are beginning to get attention from our roving hams as well. One is SOTA (Summits On The Air) and a couple of SIG members recently did their first SOTA "activation" – as posted on our Slack channel on Sunday, March 19th —

KD2YEW & N2BTD 7.213 k-2078 & SOTA W2/GC-055 Hook Mountain

Brian N2BTD posted a quick video of the site...

All right, here's the antenna
and fed half wave and here's our operating position.



Here's his more detailed report, in the next column.

Report from Portable Ops SIG, cont'd

On Sunday 3/19/23 Portable Operators Michael Volpe KD2YEW & Brian Duddy N2BTD set out to do a dual SOTA/POTA activation of Hook Mountain in Rockland County, NY. Hook Mountain has a SOTA reference of W2/GC-055 and a POTA reference of K-2078.

It was a short 15 minute climb to the summit from the parking area along Route 9W. Once we reached the top we strung a wire from the top of a tree to an extended fishing pole and started operating.

We started on 40 meters and were able to work many stations up and down the east coast including club members WI2W Steve, W2MSA Noel & W2SCT Ken.

We then switched to 10 meters and were able to work Portugal & Italy before changing to 15 meters where we were able to work France & Switzerland. The wind started to pick up and the temperature started to drop so we decided to call it quits after about an hour of operation and 32 stations in the log. This was Brian's first SOTA activation, and it won't be his last.

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Backyard Testing Before Going Portable

— Bill KD2ZXC

Between working, studying for my General, and taking care of a newborn, it's been a busy winter for me. Nevertheless, my enthusiasm for radio and portable ops has only grown stronger. Each passing day is a day I could have been out activating a park or a summit, but I'm conscious of the fact that as a newcomer there is a lot I don't know, and as the saying goes... failing to plan is planning to fail.

With my tax return and a newly minted General Class license in hand, I ordered myself a Xiegu G90 transceiver, a battery, a wire antenna, and a telescoping mast. Before hitting the road though, I needed to make sure everything was in working order. During one of the unseasonably warm late winter days we just had, I unpacked all of my gear in the backyard, got the antenna up, plugged the battery into the transceiver, and... nothing.

Before allowing myself to get too frustrated I took to my favorite place on the internet: the FLARC Portable Ops SIG on Slack. I posted a picture of my setup and not a minute later David K2DBK, Kevin K2KCC, and Jim W2JC were on the case. After a quick 30 minutes of troubleshooting I had my radio powered on!

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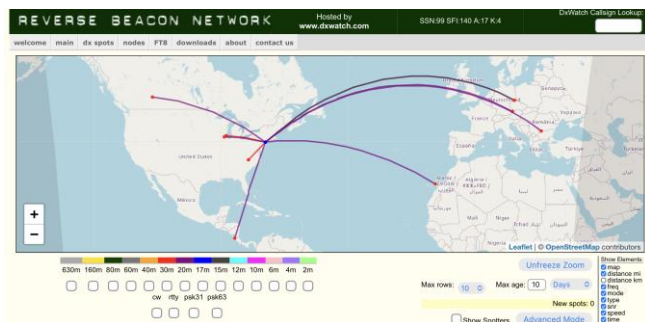
Report from Portable Ops SIG, cont'd



I'm so grateful to have such a supportive group of mentors within arm's reach, for when things get tough (which they very often do).

Noel W2MSA, Mike KD2YEW, and Brian N2BTD are also always there when I have a quick question.

How's it working? I sent out a quick CW CQ to check propagation on the Reverse Beacon Network and, to my surprise, with 10-15 watts I hit a few spots in central Europe, the Canary Islands, central America, and Canada.



Hopefully by the time you're reading this I'll have activated my first park, but looking at all of these settings on my radio has my head spinning...

Perhaps my friends in the Portable Ops group can help.

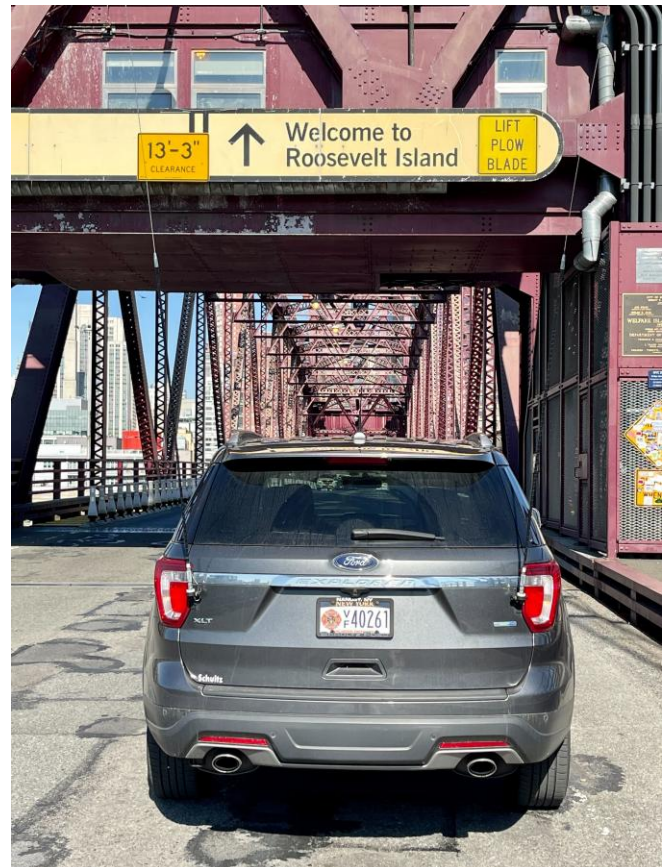


73, Bill KD2ZXC

On Sunday, April 9th, Brian N2BTD activated Roosevelt Island NY for Islands on the Air (IOTA) id NY029R.

Here he is heading over the bridge to the island — notice the two whip antennas on the trunk lid?

Maybe we better not ask HOW he got this photo! [Stopped in the middle of the road and walked behind the car?]



And here is the view of the cherry blossoms!



Theoretics Demystified

This time the subject is the electromagnetic spectrum and photons.

We start the sound spectrum at zero and go up from there. We can hear sound vibrations from about 20 cycles up to about 20,000 cycles. These are sound vibrations which we can hear. We call it *sound* which is a mechanical phenomenon. After that we get into supersonic audio which many animals can hear up to about 60,000 cps.

The electromagnetic spectrum starts at zero Hz (cycles per second) and goes up all the way to gamma rays. The electromagnetic spectrum is exactly what it says, electro-magnetic with photons being the fundamental unit of electromagnetic radiation. The very low frequencies are used for electrical transmission including power and for audio reproduction.

At all frequencies the alternating current in a wire gives off a magnetic field. As the frequency goes up into the kiloHertz range the field becomes more useful as what we call radio waves.

At that point we start to deal with radio waves with a very long wavelength. As you go up in spectrum, cycles per second, (frequency) the wave lengths get shorter. The more cycles there are in a given time (a second in this case) the shorter the wavelength must be to fit into that time frame.

When we talk about radio frequencies, we generally use the term Hertz in honor of Heinrich Hertz who was involved in early radio experimentation. So, we say 60 Hz, (pronounced "hurts") instead of 60 cycles (cps).

Getting back to wavelengths and the Electromagnetic Spectrum, as the frequency of the energy increases in the electromagnetic spectrum, the wavelengths get shorter, and they get to be microwaves and then become infra (below) red and then the visible spectrum which starts at red and moves up in frequency to blue then to the ultraviolet. Past that there are x rays and ultimately gamma rays!

For now, we are talking about the visible light spectrum. Interestingly, at each part of the spectrum, the waves seem have different properties. Light is a wave and is also perceived as a particle and is therefore sometimes called a 'wavicle'. Photons have

Theoretics Demystified, continued

a wave-particle duality, meaning that they sometimes behave as waves and sometimes as particles. They are a combination of waves and particles in the quantum, subatomic level. Sometimes photons behave more like waves, and other times more like particles.

The photon is a fundamental quantum unit of electromagnetic force. That means that they are the same, mass-less particle at any frequency but seem to behave differently at different frequencies. This is why they can be perceived as light in our visible spectrum but can also cause current to flow in radio antennas.

As a reminder electromagnetic radiation should not be confused with sound vibrations which are mechanical, as was explained earlier. Electromagnetic radiation can be at one cycle per second as well as a mechanical vibration that we perceive as sound. The AC current in your house wiring is a 60-cycle electromagnetic force that we call electricity but you can also hear a 60 cycle tone or musical note.

Light is composed of photons which are created when electrons in an atom (say in a light bulb), be it incandescent or another device, are raised to an excited state above their ground (normal) state. The electrons then emit the extra energy as photons which in turn excite the electrons in our retinas producing a stimulus in our brains which we perceive as light from the light source and all of the objects in the room the light is in.

But what happens to the photons that we do not see that hit the walls or the ground or whatever? They are absorbed by the material they hit by exciting the electrons in the atoms of that material to a higher state thereby producing, by the excited state, heat. Think of touching a rock on a warm sunny day and feeling the heat the rock gives off!

Photons travel at the speed of light (which they comprise) in a vacuum and extremely close to those around us. When you look into a room for instance, what you are seeing is all of the photons that have bounced off the objects, walls, floor and ceiling which are then focused by the lens in your eye which

Continued on next page.

Theoretics Demystified, continued

excite the atoms in your retinas, which in turn send electrical signals to your brain enabling you to see the room and the things in it. Again, what happens when you turn off the light?

All of the energy the photons possess is absorbed by the materials in the room (remember the rock on the warm sunny day) it happens so fast that to us that it seems that it is instantaneous.

Photons are subatomic (quantum--meaning the most basic) particles that carry energy in all parts of the electromagnetic spectrum, but we are most familiar with them in the infrared, visible light, and ultraviolet part of the spectrum which lies above the shortest radio waves. What makes this so interesting is that the waves in the 'radio' part of the spectrum's waves seem to behave differently!

Think that photons act like a ripple in a round kiddie pool where you throw a stone in, the ripples spread out to the edge of the pool causing the sides to move. The water did not change state but merely conveyed the energy of the stone to the edges of the pool. In the same way the photon, the sound wave, or the radio waves are simply conveying energy but not changing the medium that they are traveling through.

Photons and radio waves are mass-less conveyors of energy, but sound waves are different, again, as they are mechanical in nature like a stone in the kiddie pool.

In our eyes photons excite cells in the retina to produce electrical impulses to the brain that we perceive as sight. In radio the same photonic energy, by its electromagnetic characteristic, produced through the magnetic field, current in radio antennas!

Remember that current can only be caused to flow in a wire when the magnetic field is in motion and the radio waves are in motion when they hit an antenna thereby causing current to flow in the wire which then is used to decode the signals in your radio!

There is so much more to this subject, as I have only scratched the surface. It is a good beginning anyway.

Fred Wawra, W2ABE, 73.



Radio Direction Finding SIG Report

This group will discuss Transmitter Hunting - also known as T-Hunting, Fox Hunting, Radio Orienteering or Radio Direction Finding.



We are starting to plan the next transmitter hunt for the early Spring. Both low power (15mW) for training at the park and then a higher power (1W) transmitters will be via car.

Great event to get the youth interested.

Kits, builds, techniques, and other transmitter hunting information will be on the SIG section of our groups.io website.

For those interested in joining the Radio Direction Finding SIG, subscribe at:

[Radio-Direction-Finding+subscribe@FairLawnARC.groups.io](https://groups.io/join/Radio-Direction-Finding+subscribe@FairLawnARC)

TYPES OF CABLES AND USB



Order a FLARC Shirt!

Nomar NP4H is taking orders for a spiffy bright red (really sort-of maroon) polo shirt for Field Day. This is a pilot for a possible new vendor and will match our current shirts which are available by mail. This order is from a reputable local vendor. The price is \$25.00 with your call sign sewn in.

Contact Nomar directly at np4h@aol.com.



For FLARC membership info and renewal/application form please visit:

membership.FairLawnARC.org

FLARC Dues, new and renewal, (and even donations!) can now be made on-line ...

[Please note that this is a temporary improvement while Dave KD2JIP works on a real, full-fledged web page for filling out the membership/renewal form and submitting that and payment on-line.]

Payments can be made using either PayPal or Zelle.

Here's how –

Using PayPal —

Log into your PayPal account at

<https://www.paypal.com>

At top right, select "My PayPal"

Under Quick links, select "Send Money"

In the window showing
Name, email or mobile number
enter this email address:

1947xyzabc1947@gmail.com

Click on [Next]

Enter \$ amount you are sending, & in "add a note" area type in your CALL SIGN and which year (2020 or 2021) the dues are for, & any other explanation.

Click on [Continue]

Click on the [Change] button

Click on "Sending to a friend" link

CONTINUED IN NEXT COLUMN —>



Sending to a friend

No fee to use bank or balance to send to friends and family in the U.S.

You will see a summary of your transaction; if no changes are required, click on

[Send Payment Now]

to complete your transaction.

\$

Using Zelle —

If you are using Zelle through your bank account, just send your dues to the following number: 201-240-9317

Don't forget to add in the note/message section your callsign and that it is for your 2020 and/or 2021 dues.

For a PDF form that can be filled in on-line, then printed and mailed with check, [CLICK HERE](#)

Or you can print this page, fill it in and mail to the address shown at the bottom.



Fair Lawn Amateur Radio Club

Fair Lawn Recreation and Community Center
10-10 20th Street
Fair Lawn, N.J. 07410

MEMBERSHIP/RENEWAL FORM

Name _____ Call _____

Address _____ PO Box _____ Ste./Apt # _____

City _____ State _____ Zip _____

Roster Published Phone # _____ Unpublished Phone # _____

Roster Published EMAIL _____ License class: _____

Check all that apply ☐ ARRL Member ? ☐ RACES Member ? ☐ ARES Member ? ☐ CERT ? ☐ VE ?

Additional Family Members (In same household) --

Name _____ Call _____

Name _____ Call _____

Introductory and Student Membership \$ 20 \$ _____

(Students under the age of 18 eligible for student membership)
(Introductory membership open to new members
or not a member in last 7 yrs)

Associate Membership * (No Fee)

* Open to Fair Lawn Residents Only. No voting rights or other privileges.

Renewal of Current Membership \$ 25 \$ _____

Three Year Renewal Incentive \$ 65 \$ _____

(Single memberships only, family memberships excluded)

Additional Family Members # _____ at \$ 5 each \$ _____

Life Membership \$ 625 \$ _____

Senior Life Membership (65 yrs. of age or over) \$ 250 \$ _____

Equipment Fund Donation, above regular membership dues \$ _____

Total submitted \$ _____

Date _____

I hereby acknowledge the By laws and rules and regulations of the club and will abide by them as amended

Please Note: Memberships are NOT Pro-Rated. Membership is from Jan 1st to Dec. 31st of any given year unless documented otherwise.

Please make your dues check payable to the "Fair Lawn Amateur Radio Club" and remit to the following address:

Fair Lawn Amateur Radio Club

Attn: David Gotlib KD2MOB

10-10 20th Street

Fair Lawn, NJ 07410

See website [<http://FairLawnARC.org>] for other membership options.

Complete this form for NEW or RENEWAL ARRL membership and give to FLARC Treasurer [David Gotlib KD2MOB] with your payment check.



ARRL Affiliated Club Membership Application

- ☐ I am a brand-new member, or my membership lapsed for 2 or more years. My club will receive a \$15 commission.
☐ I am renewing (includes lapsed members of less than 2 years). My club will receive a \$5.00 commission.

Name _____ Call Sign _____
 Address _____
 City _____ State _____ ZIP _____
 Email _____ Phone _____
 Date of Birth ____ / ____ / ____

- ☐ My Family Member is Joining or Renewing: (Annually \$10 per member)

Name _____
 Name _____

Your Annual Membership Dues –

Circle Your Choice

	3 Years	2 Years	1 Year
US Membership	\$140	\$95	\$49
International (Digital Only)	\$140	\$95	\$49
International (with mailed QST)	\$217	\$147	\$76
Blind	\$30	\$20	\$10
Family	\$30	\$20	\$10
Student			\$25

TOTAL \$

Choose your print magazine –

Check One

- ☐ **QST**, ARRL's membership journal for active radio amateurs (12 monthly issues)
☐ **On the Air**, Beginner-to-intermediate-level help and advice (6 bimonthly issues)
☐ **Digital Only** (All members can access the digital versions of both magazines)

Payment

Enclosed is my: ☐ Check ☐ Money Order ☐ Charge Request

Charge to my: ☐ Visa ☐ Mastercard ☐ Amex ☐ Discover

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Toll Free (US) 1-888-277-5289 or 860-594-0200 • ARRL, 225 Main St., Newington, CT 06111-1400
 membership@arrl.org • www.arrl.org/join

April 2023

FLARC Business Meeting

FAIR LAWN AMATEUR RADIO CLUB

MINUTES BUSINESS MEETING

APRIL 14, 2023

President Dave KD2JIP called the meeting to order at 7:30 PM.

At his request the members present in person rose and recited the Pledge of Allegiance.

The President asked the Club Secretary, Jim W2KNG, to call a role of the officers and Trustees. The Secretary called the following, each of whom responded as "present" :

President, Dave KD2JIP,
Vice President, Lee KD2DRS,
Treasurer, Dave KD2MOB,
Secretary, Jim W2KNG,
Trustee, Steve KA2YRA,
Trustee, Fred W2ABE and
Trustee, Brian KD2KLN.

The Secretary confirmed to the President that all officers and Trustees were present and a quorum existed in order for the meeting to proceed and business conducted.

The President then asked for a motion from the floor for the approval of the minutes of the business meeting held March 3, 2023. Upon motion duly made by Bob, KC2ORX and seconded by Skip, KD2BRV the motion to accept the minutes of the meeting held March 3, 2023 was unanimously carried and the minutes approved.

The President then presented his report to the members.

The first item was introducing Jim, W2KNG as the new Secretary.

The President then reported the establishment of a new committee, a Member Engagement Committee.

The mission of the Member Engagement Committee is to increase member participation, especially with respect to in-person events, using to a large extent the interests reflected on Ed's, WX2R, member survey.

Part of this effort will involve person to person telephone contacts with less than active members. This will be a two pronged effort. The first prong will be the Member Engagement Program itself, which is chaired by Fred, W2ABE. The second prong will be a revived Education Committee to be chaired by Stan, K3KKH.

It is anticipated that these two efforts will work in a coordinated manner.

The President then reviewed some upcoming events, including a VE Session to be held the following day, a youth event organized by Lee, KD2DRS involving the building of pizza box crystal radios, also to be held the following day, and a fox hunt to be held at Memorial Park, again to be held the following day.

Also the President made note that Tuesday April 18 is World Amateur Radio Day. In connection with World Amateur Radio day, Ed, WX2R reported from the floor that the Clubhouse will be open beginning at 11:00 AM and will remain open until 8:00 in the evening. WX2R also informed the membership that the Club had received International Amateur Radio Union (IARU) accreditation making the Club an official World Amateur Radio Day global station. Ed also informed the membership that this is not a contest but an operating event and he encouraged members to participate.

Continued on next page.

April 2023 FLARC

Business Meeting, continued

Steve, W12W next reported that Saturday April 29 will be BARA Portable Day. Steve then read a statement from the President of BARA, K2ZO, giving a brief overview of this event. The event will be held at Pascack Brook County Park on Emerson Road in Westwood and BARA has reserved Area B. The festivities start at 9:00 AM and all are welcome.

Continuing on reporting on upcoming events, the President reminded the members that Earth Day will take place on Wednesday May 24 at the Paterson Great Falls from 9:00 AM to 4:00 PM.

The President then reported that the Club was moving forward to allocate the generous donation made by the Whitmore family in honor of Bob Whitmore, SK - an avid ham throughout his life. The decision has been made to sell the equipment donated. The use of the proceeds from that sale is still to be determined. The Club is also investigating an appropriate plaque to commemorate the donation.

The President then asked for the Treasurer's Report.

The Club's Treasurer, Dave KD2MOB, first gave thanks to the previous Treasurer, Bruce NJ2BK for all his efforts on behalf of the Club. He then reported on the state of the Club's finances and ended by reminding those members who have not yet paid their dues to please do so. Upon motion duly made by Judith, KC2LTM, and seconded by Gene, WO2W, the Treasurer's Report was unanimously approved.

The President then asked for Committee Reports and called upon Fred, W2ABE to report on the new Member Engagement Committee. W2ABE stated that the first task is to collect data on all members, their status, as to active or otherwise, and match each member's interest with data collected from the Member Survey. That will lead to telephone calls to the member to try to encourage dormant members to get back to active participation in the Club and get involved. W2ABE made the point that the personal touch of a telephone call will go a long way to connect with members and demonstrate the Club's concern for them and interest in having them return to the fold.

The President then reviewed all the Special Interest Groups and the respective SIG leaders.

The various SIGs and leaders are as follows :

Contesting	Van W2DLT
DX	Jim W2JC
Digital Voice	Bob KD2BKD and Dave N2AAM
EmComm	David KD2MOB and Jim N2JLF
FT8	Jim W2JC
Portable Ops	Noel W2MSA and Steve KA2YRA
Radio Direction Finding	Bob KD2BKD
Raspberry Pi	Bob KD2BKD
Radio Monitoring	Ed WX2R and Dave N2AAM
Satellite	Bob KD2BKD and Nomar NP4H

The President noted that the Education Committee will be working closely with the Special Interest Groups and looked forward to that getting started.

Continued on next page.

April 2023 FLARC

Business Meeting, continued

The President then asked Lee, KD2DRS, to report on the Youth Committee. He stated the following day there will be a pizza box crystal radio assembly event. There will be 7 children and 6 adults. These all come from the Science Day event FLARC presentation, held in Ridgewood. He also reported that he had had discussions with an educator who is a member of the West Palm Beach Radio Club to discuss ideas about getting youth involved. At the moment there are no further activities planned but Lee has asked every member of the Youth Committee to select one event and work to make it happen.

Judith, KC2LTM, then gave a report on Health and Wellness. She reported that she had sent out one get well card in the past month.

Ed, WX2R, then gave a report on the Marketing Committee. He promised to be brief. He made mention of the World Amateur Radio Day and Earth Day at Great Falls which had been discussed earlier in the meeting. He then reported on the next Kawfee Talk, which will be held in the club rooms next Friday by David WO2X – who will be demonstrating how to use a Flex radio. Ed will schedule future Kawfee Talks shortly.

Ed further reminded the members that the week of August 9 the Club will be committed to running W1AW/2. Ed is looking for members to work with him to make the week a success. On October 14 there will be a partial solar eclipse. The Club will be participating in activities surrounding this event. In addition, April 29 is the next exchange with the West Palm Beach Radio Club. They want again to practice slow scan TV at this time. September 15 will be POW/MIA Day. The West Palm Beach Radio Club is heavily involved this effort so Ed suggested we work with them to show our support – not only for the cause but also for them as friends. This is not a contest but an operating event.

The President then read a report from the Social Media Committee and reported various statistics concerning visits, hits, like, shares and posts on social media. The tops posts were for Super Science Saturday with good engagement. The anticipation is that the numbers for April will increase as there are now ways to reach people who have engaged our site in the past.

The President then asked Gene WO2W to report on community relations. Gene reported that the Club has been asked to assist with the Memorial Day Parade, as it has in the past. He asked members if anyone had any ideas for a float or display that can be added to the parade. No plans have been made for the Street Fairs in June and October at this time.

The President then asked for an update on the Hamfest and Auction. Gene WO2W stated that he is only involved in the Hamfest and that Nomar NP4H has offered to assist with that. Gene reported an unbelievable response for support and sponsorship. Bioenno Batteries has donated batteries and chargers. Kantronics has donated Interface equipment. Gene reiterated the need for volunteers to work the gates and parking. Gene expects double the number of vendors and people through the gate this year. The Hamfest will be heavily advertised in ham radio publications including QST. The date is Saturday June 10 with a rain date of Saturday June 17. There was a question from the floor as to whether the Hamfest will be advertised on QRZ and the answer was yes. Before the Hamfest Gene will send a list of merchandise to be sold and members will have first crack to purchase at the listed price.

Brian KD2KLN then gave a report on nets, reporting on statistics for the Near and Far Net for the month of March, along with the net control operator for each session in April.

Jim W2JC then gave a brief report on the website. He also stated that he has extracted all minutes from business meetings which were included in the Resonator and placed them in the FILES area of our Groups.io

April 2023 FLARC Business Meeting, continued

The President then presented the Tech Committee Report on behalf of Paul, W2IP.

The Tech Committee has proposed the purchase of equipment including an INRAD HF Tri-Plexer for 10-15-20, which, though out of stock at the moment, has an estimated cost of \$325. In addition the Tech Committee proposed the purchase of the following VHF and UHF equipment :

- 1 Comet #GP-95 144-440-1.2Ghz antenna for \$160.95 (to replace removed antenna)
- 1 Diamond #X300NA 144/440 for \$144.95 (to replace removed antenna)
- 1 Comet #CX-333 144/220/440 for \$171.95
- 1 Comet # CFX324A 144/220/440 Triplexer for \$88.95 (to simultaneously connect
XPR4550 VHF/UHF DMR Radios & Alinco 220 radio onto a dedicated CX-333
antenna – freeing up to 3 positions on the antenna patch panel)
- 1 Diamond V200A 50/144/440 Triband Antenna (to replace removed antenna)
- 1 Diamond MX-2000 50/144/440 Triplexer (each band individually chosen on the patch panel)
- 6-9 additional Bulkhead Connectors estimated at \$10-\$16 each

The total cost would be estimated at approximately \$990.

Gene WO2W mentioned that the antennas that are being considered to be replaced are over 12 years old and have reached the end of their useful life and some have already been taken down. Steve WI2W suggested that perhaps the Club should focus on the main HF antenna, which is broken, and reminded the members that the Club lost its 6 meter and 10 meter antennas – which had been taken down to install the repeater antenna. He suggested that perhaps further discussion is necessary before the Club spends money on VHF/UHF antennas. Jim W2JC asked how much the VHF/UHF is actually used and Steve WI2W added that HF is used extensively and very little VHF/UHF is actually used at the Club.

This led to some discussion, at times lively, among the members with various points of view being expressed. During that discussion, Gene WO2W, gave some history on the installation of antennas over the years and various coax runs that exist at the present time. One point that was made was that even if all the proposed antennas were installed no new coax runs would be necessary.

At the end of the discussion the President proposed that the proposals raised by the Tech Committee be tabled and that further discussion take place among those members interested in this issue. Gene WO2W then commented that under the Club's By-Laws the Board has the authority to accept the Tech Committee's proposal and no member vote is needed. At the end of further discussion Karl, W2KBF, made a motion to accept the Tech Committee's Proposal and the motion was seconded by Skip, KD2BRV. There was then a motion to amend by Stan, K3KKH seconded by Brian, KD2KLN to put everyone concerned together to come back to the membership with a resolution. That motion was carried.

Steve, KA2YRA then reported on Internet connection issues. There are two issues — one: to provide a permanent Internet in the Clubhouse; and two: to provide portable off-site Internet connectivity. Both are being worked on and there will be a report further on.

There was then a report by Dave KD2MOB on RACES and ARES. He thanked those members who participate in the nets. He also discussed the fox hunt to take place the following day.

Gene WO2W then reported on VE Testing Sessions, including the session to be held the following day. He stated that the session will be conducted by Bill, NB1LL.

April 2023 FLARC

Business Meeting, continued

The President then suggested that all Club events be submitted to the Board in advance, to allow for proper coordination. For example, there are several events scheduled for the following day and while that does not present an immediate problem, in the future problems and conflicts may arise. Therefore the President asked that all planned events be submitted to the Board for proper coordination.

Fred, W2AAB then asked if the Club could find out when there will be shows at the theater so Club events can be coordinated with them, in light of parking and general crowding.

Steve, KA2YRA then reported on Portable Ops. He stated that the following weekend is “Support Your Parks” weekend, which is a quarterly event – so he encouraged members to get out and operate in a park.

He also made a shout out to Brian N2BTD who earned a “kilo” award, which is 1,000 activations in each of the 13 POTA parks in Rockland County (NY), which is quite an achievement.

Also on Sunday there will be a 2 meter simplex event (146.565 Mhz) from the top of Bear Mountain to see how far they can reach.

Steve KA2YRA reported that next weekend James KD2FMH will be activating W2P at West Point, for a large Boy Scout event. Anyone interested should get in touch with KD2FMH.

Ed WX2R reported on some good publicity that came out of the Club’s joint operation with the West Palm Beach Radio Club. Finally he reported that “Rick the Sign Man” is prepared to produce Club badges at reasonable prices. Ed will work to get Rick our logo and then Rick will be prepared to make badges.

The President then asked for suggestions for someone to make a plaque and some suggestions came from the floor.

Fred, W2ABE, asked that when members sign in, please sign in legibly and remember to sign out.

Dave KD2MOB then reported that the Club has members overseas who may wish to pay dues in currencies other than US currencies. This led to a discussion of how this should be handled but in the end the matter was dropped.

Upon motion to adjourn the meeting made by Lee KD2DRS and seconded by Brian KD2KLN, the motion was unanimously approved and the meeting was adjourned.

Respectfully Submitted

Jim Jalil W2KNG,
Secretary



Past FLARC Member Profiles

Here is a list of past member features and we welcome your recommendations for new profiles -- including your own.

Month	Name	Call Sign
January 2016	Pete	KB2BMX
February	Marco	KC2ZMA
March	Ron	KC2TBD
April	Kai	K2TRW
May	Larry	WA2ALY
June	Dave	N8MAR
July	Steve	W12W
August	Thom	W2NZ
September	Brian	KD2KLN
October	Brad	KM2C
November	Al	WA2OWL
December	George	W3EH
January 2017	Fred	W2ABE
February	Dave	KD2MOB
March	Randy	WU2S
April	Lee	KD2DRS
May	Gene	WO2W
June	Carol	KD2NMV
July	Kevin	KC2KCC
August	Robert	KD2NOG
September	Robert	KD2BKD
October	John	KD2NRS
November	Fred	W2AAB
December	Margaret	W2GB
January 2018	Brian	KD2OAZ
February	Bennett	KO2OK
March	Van	W2DLT
April	Aly	ALØY
May	Bruce	NJ2BK
June	Dave	N2AAM
July	Karl and Susan	W2KBF and W2SKT
August	Steve	KA2YRA
September	Paul	K2PJC
October	Skip	KD2BRV
November	Jim	W2JC
December	Tom	N2AAX

By the way, Randy (WU2S) has compiled a binder of all back issues of *The Resonator* and it's located in the club office.

Thanks Randy!!!

2019-20 Member Profiles

The year is now complete and here is a list of the 2019 monthly profiles. See past profiles elsewhere in *The Resonator* to check back in the archives to see each featured member's background.

Month	Name	Call Sign
January 2019	Dave	KD2JIP
February	Jim	K2ZO
March	Zach	KC2RSS
April	Bob	N2SU
May	Stan	KC2K
June	Steve	WA2BYX
July	Roger	K2RRB
August	Judith	KC2LTM
September	Chris	W2TU
October	Bob	N2SU
November	Bob	WA2ISE
December	Carol	KD2NMV
January 2020	Gordon	W2TTT
February	Chris	KD2JQZ
March	Glenn	KD2MDR
April	Steve	K2SAB
May	Ahmed	NJ8Y
June	Charlie	AC2ZU
July	Jim	N2JLF
August	Walt	K3DQB
September	Gregg	N2ECH
October	Jim	W2KNG
November	Dave	KD2SGM
December	Bill	NB1ILL

2021 Member Profiles

Here is a list of the 2021 monthly profiles.

Month	Name	Call Sign
January 2021	Ed	KD2TVT
February	John	W2USN
March	Noel	W2MSA
April	Gene	KD2VNI
May	Berlotte	KD2MYF
June	Noel	N2OEL
July	Roy	KD2VMX
August	Jeremy	K2GRI
September	Bill	WA2WL
October	Nomar	NP4H
November	David	AC2GL
December	Paul Brennan	N6FB/MØJOV